

## Overseas

# HONGKONG POLYTECHNIC

The Hong Kong Polytechnic is an expanding institution which is now putting into effect a forward looking development plan incorporating a credit unit approach combined with a self learning system. The basic teaching departments are being re-organised into three Divisions—Engineering, Applied Science and Commerce and Design, together with new broad, inter-disciplinary centres relevant to the needs of Hong Kong. The polytechnic invites applications for the following posts within the relevant departments tenable from 1 September 1977, except where otherwise indicated:

## ACCOUNTANCY

Principal Lecturers in Management Accounting and Financial Accounting;  
Senior Lecturers in Advanced Accounting;  
Lecturers in Financial Accounting, Management Accounting, Costing, Auditing, Executorship Bankruptcy and Taxation.  
(Professional accounting qualification required for appointments at Principal Lecturer and Senior Lecturer levels.)

## APPLIED SCIENCE

Principal Lecturers/Senior Lecturers/Lecturers in Materials Technology, Engineering Science, Surface Finishing, Instrumentation, Packaging, Food Technology, Biochemistry, Medical Physics, Human Biology and allied fields.

## BUILDING & SURVEYING

Principal Lecturers in Building Services (MIVE or equivalent required);  
Senior Lecturer/Lecturer in Quantity Surveying and allied subjects (ARICS or AICS required);  
Valuations/Land/Urban Economics (ARICS required);  
Town Planning (MRTPI required);  
Building Technology and allied subjects (MIOB required);  
Building Services (MIVE or equivalent required).

## BUSINESS & MANAGEMENT STUDIES

Principal Lecturer in Economics;  
Lecturers in Law, Transport Studies, Banking Studies, Management Studies, Economics and Secretarial Studies.

## CIVIL & STRUCTURAL ENGINEERING

Lecturers in Civil Engineering Construction/Concrete Technology/Geotechnical Engineering (Poste tenable immediately);  
Lecturer in Structural Analysis and Design and general Civil Engineering subjects.

## COMPUTING SCIENCE

Principal Lecturer/Senior Lecturers/Lecturers in Systems Analysis, Data Processing, Programming, Systems Programming, Management Information Systems, Graphics, Computer Assisted Instruction and the application of Computers in other disciplines being taught at the Polytechnic.  
(Applicants with experience in offering computer courses to the general public would be particularly welcome.)

## DESIGN

Senior Lecturer in Photography;  
Senior Lecturers/Lecturers in Functional Clothing and Drawing/Surface Pattern;  
Senior Lecturer/Lecturer in Interior Design (Poste tenable immediately).

## ELECTRICAL ENGINEERING

Senior Lecturer/Lecturers in Utilisation and Control of Electrical Equipment, Design and Specification of Electrical Installation Systems, Electrical Machines and Power Systems.

## ELECTRONIC ENGINEERING

Lecturers in Basic Electronic Engineering, Power Electronics, Integrated Circuit Application, Thick Film Technology, Television and Radio Engineering, Control and Communication Systems (Poste tenable immediately).

## LANGUAGES

Senior Lecturer in Chinese;  
Lecturers in English and Japanese.

## MATHEMATICAL STUDIES

Senior Lecturer in Engineering Mathematics

## MECHANICAL & MARINE ENGINEERING

Lecturers in Machine Design with experience in Mechanics of Machines, Tribotechnology/Plant Engineering, Fluid Power and Control with experience in circuit design.

## NAUTICAL STUDIES

Senior Lecturers/Lecturers in General Nautical subjects, Naval Architecture and Ship Construction, Electronic Navigational Aids, Marine Radio Communication and Marine Electronic Automation.

## PRODUCTION & INDUSTRIAL ENGINEERING

Senior Lecturers/Lecturers to teach at least two of the following subjects: The Engineering Society, Analysis of Manufacturing Systems, Production Technology, Operational Research (all up to CEI Part 2 level i.e. degree standard), Polymer Engineering and Industrial Management.

## TEXTILE INDUSTRIES

Principal Lecturer/Lecturer in Knitting Technology (experience in knit knitting preferred);  
Senior Lecturers/Lecturers in Textile Technology (experience in either woven fabric manufacture or yarn manufacture preferred);  
Clothing Technology (experience in fashion design or garment production methods preferred).

## GENERAL QUALIFICATIONS

Principal Lecturers  
(a) a degree or professional qualification; and  
(b) an advanced specialist qualification or extensive experience in a specialised field; and  
(c) substantial teaching and industrial commercial experience; and  
(d) proven administrative ability.

Senior Lecturers  
(a) a degree or professional qualification, plus preferably an advanced specialist qualification; and  
(b) at least 5 years' professional experience; and  
(c) substantial teaching and/or industrial/commercial experience (about 3 additional years); and  
(d) proven administrative ability.

Lecturers  
(a) a degree or professional qualification or at least a Higher Technician qualification in the appropriate field of study; and  
(b) at least 5 years' professional or industrial/commercial experience or at least 3 years' teaching experience or a suitable combination of professional and teaching experience.

**SALARIES**  
Principal Lecturer  
HK\$85,500 x 6 increments—\$105,600 p.a.  
Lecturer/Senior Lecturer  
HK\$68,040 x 11 increments—\$88,940 p.a. (bar)  
HK\$68,420 x 6 increments—\$83,540 p.a.  
Sterling equiv @ HK\$8.11 = £21 (28.8.78) respectively  
£10,843—£13,021;  
£26,580—£31,534;  
£24,891—£28,501;  
Tax on salaries in Hong Kong does not at present exceed 15% of gross earnings.

**TERMS**  
Appointments will be on 2-year gradually beating contracts initially. Thereafter suitable appointees may be offered further contracts or superannuable terms of service at the discretion of the Polytechnic. Benefits include passage, long leave, quarters, medical and dental benefits, education allowances and holiday visit passages for children, and a terminal gratuity equal to 25% of basic salary received over the entire contract period.  
Further details and application form, which should be returned not later than 13 November 1976, obtainable from the Recruitment Unit, TETOC (Technical Education and Training Organisation for Overseas Countries), 35/37 Grosvenor Gardens, London SW1W 0BS.  
Enquiries should quote ref. HKP/THES and clearly state the post involved and its level.  
Interviews conducted by a team from the Hong Kong Office will be held at 10.30 a.m. on 14 February.

## SWINBURNE COLLEGE OF TECHNOLOGY

Hawthorn, Victoria, Australia

## PRINCIPAL LECTURER

# MATHEMATICS

Swinburne College of Technology is a tertiary educational institution affiliated with the Victoria Institute of College, with a large measure of autonomy under the governance of a College Council. The College is situated in Hawthorn, approximately four miles from the centre of Melbourne in the state of Victoria.

The Department of Mathematics has a staff of 24 and is part of the Faculty of Applied Science. For a number of years, the department has offered Mathematics for students undertaking courses in Engineering, Applied Science, Business and Arts. The department has recently developed a major stream in Mathematics specializing in operations research and statistics at the degree of Bachelor of Applied Science.

The successful applicant will be responsible as Head of Department for the academic leadership and more of the areas of activities of the department.

**QUALIFICATIONS**  
A degree, preferably a higher degree, with a major qualification in Mathematics. Extensive experience, preferably in industrial consultancy, research, teaching and administration.

## SALARY

Australian \$21,406.

## FURTHER INFORMATION

A schedule of duties may be obtained from the Registrar.

## CLOSING DATE

November 26, 1976.

## APPLICATIONS

Applications, in duplicate, should be addressed to—



The Registrar  
Swinburne College  
of Technology  
PO Box 218  
HAWTHORN, Victoria 3122  
Australia

Information to be supplied by applicant: full name, address, date and place of birth, marital status, qualifications, education and professional experience, date of publication works, names and addresses of referees, present appointment, and date at which it could be relinquished and any other information thought to be relevant by the applicant.

## Colleges of Education

## Announcements

### LEICESTERSHIRE

LOUGHBOROUGH COLLEGE  
OF EDUCATION

Acting Principal:  
Miss T. Hurling Jones, R.A.

DEPARTMENT OF PHYSICAL  
EDUCATION AND SPORTS  
TECHNOLOGY

Applications are invited from suitably qualified candidates for the post of Lecturer in Physical Education and Sports Technology. The successful candidate will be responsible for the teaching and supervision of students in the Department of Physical Education and Sports Technology.

The post is a temporary one at present, but the candidate appointed may be considered for a permanent appointment on a full-time basis.

Salary within the Public Scale for Lecturers (Grade 1) £11,111 to £13,111, plus 10% per annum.

Further particulars and application forms can be obtained from the Principal, Loughborough College of Education, Loughborough LE11 3TN. Applications should be sent to the Principal by Wednesday, October 28th.

### THE THURVER OF THE GLADYS KRIEKE DELMAS FOUNDATION

The New York Academy of Sciences is available in 1977 to the Commission for the Study of the World's Problems.

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### REMINDER

Advertisements should reach The Times Higher Education Supplement by the Friday prior to publication for consideration for the following week. For further details of advertising please contact Charlotte Coulson 01-837 1234 Ext. 575.

# THE TIMES

# Higher Education

October 22, 1976. No. 261

## SUPPLEMENT

Price 18p

## Closer links with community urged

by Frances Gibb

Edinburgh University should set up a Community Resource Unit to have with the local community and encourage local organisations to make use of the university's resources, an independent commission has proposed.

In its report on the university's role in the community, published last week, the commission says such a unit could have the dual function of encouraging community organisations to invite assistance from the university and of encouraging university departments and staff to respond.

At the same time it would act as an information centre, channeling requests for help and advice to appropriate departments and lecturers.

The commission, whose report has yet to be considered by the university court, was set up in August 1975 at the initiative of Mr Gordon Brown, then rector. He felt that current discussion of the university's organization did not sufficiently take into account its social responsibilities and relations with the community.

Copies of the report are to be circulated around the university. One is to be sent to Mrs Williams,

Secretary of State for Education and Science.

Among issues examined by the committee, chaired by Mr George Foulkes, chairman of Lothian Region Education Committee and assessor of the university court, were the university's role in part-time and adult education, its relationship with other educational institutions, its role in research, as an employer, in teaching undergraduates and its relationship with the local community.

Most of its contribution is at present accidental and uncoordinated, the report concludes. Staff should regard activities in this field as continuing on page 3.

## Joint learned societies aid appeal likely

by David Walker

The Royal Society and the British Academy are likely to make a joint appeal to the Department of Education to seek financial aid for the learned societies. The move follows the completion of a report on the state of learned societies in the arts and sciences by Mr Jack Embling, a retired civil servant, commissioned by a joint committee.

The sum likely to be requested will be small, possibly less than £500,000 and it would be disbursed to societies through the appropriate committees of the Royal Society and British Academy. Even a small sum, however, could save a number of societies whose financial state, according to the report, is parlous. The report recommends that some of the smaller historical and antiquarian societies could well merge in order to save money. The British Academy would act as midwife.

One issue the report leaves ambiguous is that of accommodation for the societies in central London. Two years ago Sir Isaiah Berlin, president of the BA, floated the idea of central premises for the Academy itself and bodies such as the Royal Historical Society. They would share secretarial and other services to cut costs.

A school of thought within the BA favoured asking Government for a large capital grant for such a building, but it now seems certain a smaller grant towards recurrent costs will be requested. Mr Embling's report shows many older societies are reluctant to consider even this on the grounds that it reduces their independence.

## Universities expect bigger income cuts

Universities are concerned that the proposed reduction of 4 per cent in their income for 1977-78 will be much greater in practice.

Birmingham University has estimated that the real reduction in its income could be as much as 6 to 8 per cent; £1.25m or more.

Sir Frederick Dainton, chairman of the University Grants Committee, has said that the 4 per cent reduction will not apply equally.

Birmingham University's finance officer said this week that Birmingham may certainly expect to do worse. There was also doubt whether the national insurance increase due next April would be included in the index of university costs on which "cost-plus" price figures would be based.

East Anglia estimates it is likely to face a reduction of 5.7 per cent in all budgets. The four per cent reduction would represent about £280,000 in real terms, Mr Frank Thistlethwaite, the vice-chancellor, said in a statement to the university this week.

If staffing levels were maintained, the extra cost of salary increments at current prices would be £120,000 resulting in a total deficit in 1977/78 of £400,000. A cut of 5.7 per cent would be needed to avoid such a deficit. "I cannot pretend that the situation is anything but very serious. The decisions which will have to be taken are going to be among the most difficult that this university has faced."

Edinburgh University will have to save some £800,000 in 1977/78 to cope with the four per cent cut in income, its educational policy committee has estimated. Such savings would have severe consequences, it said. Filling of posts will be subject to the strictest review, and departments have been urged to refrain from any non-essential recurrent spending.

## British science squeezed in funds crisis

by David Dickson

Widespread cuts in Britain's programme of scientific research, particularly in high energy physics, are urgently being considered following the effects of inflation and the slide in the value of the pound on the Science Research Council's annual budget.

The council held an all-day meeting on Wednesday to consider the consequences of this new squeeze, which will particularly hit its work because the sinking pound has substantially increased the cost of Britain's subscriptions to international scientific organizations.

The subscriptions account for about 30 per cent of the SRC's annual budget, and have been predicted that the budget will need to be raised from an originally-estimated £117m to £128m to cover the increase in expenditure.

About £2.1m more is needed for costs such as salaries, £5.75m more for international subscriptions, and £1m for other increases due to the general effects of inflation.

Contrary to previous practice, the Government decided last year as part of its "cash-limits" policy that increased costs of public bodies—apart from those resulting from pay awards—would no longer be automatically covered by the Treasury.

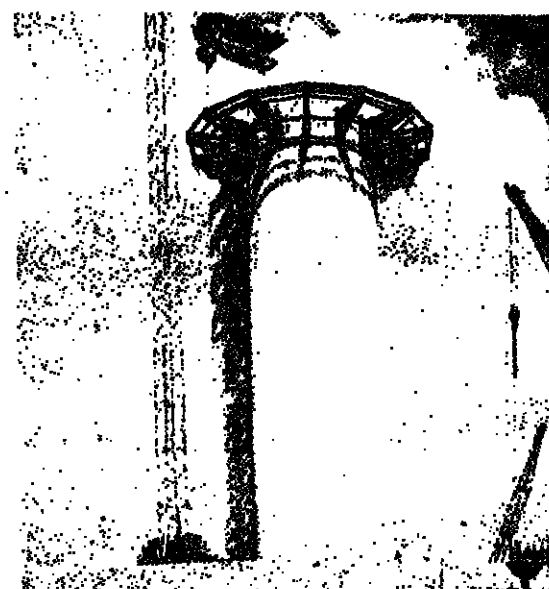
So far, it has agreed to meet only £2.5m of the extra costs of international subscriptions and has refused to provide any extra money to cover the extra costs of inflation.

Economic measures taken so far by the SRC to compensate for inflation have resulted in savings of £1.65m out of the necessary £2.1m, but it seems likely that the remainder will be found by a variety of short-term tactics.

The crisis could, however, lead the SRC to decide to cut its own research grants for the year 1977-78, and to impose a cut in the number of postgraduate awards, possibly by as much as 5 per cent.

A long-term result of the Government's continued refusal to meet the additional costs of international subscriptions could result in Britain's partial withdrawal of support from one of the world's largest programmes of international scientific collaboration, the European Organisation for Nuclear Research (CERN) at Geneva.

The contribution to CERN, £18.6m for 1975-76, has



The SRC's nuclear structure facility at its Daresbury Laboratories, scheduled to come into operation in 1979. So far it is relatively unaffected by expenditure cuts.

been a major cause of the current crisis. The member countries of CERN are required to contribute to the costs of this organization's programmes, estimated at about £160m in the current financial year, in Swiss francs.

As the pound has decreased in value, from about 5.6 francs three years ago to just over four francs at present, so the cost of Britain's contribution has increased.

At its meeting on Wednesday, the council discussed the results of a survey carried out last week by two of its research programmes for the current year.

The directors of all major SRC laboratories were asked to prepare estimates of the amount that would be saved if no further recruitment, capital expenditure and recurrent expenditure—excluding salary and basic running costs—were carried out.

They were also asked to consider the implications, both financial and scientific, of closing down the council's two particle accelerators, NINA at the Daresbury Laboratories and Nimrod at the Rutherford Laboratories, from the end of October. Although it had already been planned that NINA would close from the beginning of next year, it had been hoped to keep Nimrod in operation until at least the end of 1978.

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## SRC braced for huge budget fall

The cumulative effects of public expenditure cuts are likely to lead to a reduction of at least one-sixth in the SRC's budget, the Science Research Council (SRC) has estimated, according to a new annual report for 1975-76 published yesterday.

The council says that such a reduction calls into question its ability to support a balanced programme of research in line with the responsibilities required of it by Government and the standards of education and research in universities.

On the assumption that its funds will drop by about 2 per cent a year between 1976 and 1980, the council has decided that expenditure on nuclear physics would, in such circumstances, be reduced from £41m to £20,500,000 a year.

The latter would be the minimum viable level consistent with its subscription to the European Organisation for Nuclear Research (CERN), on which Britain's high energy physics programme would be focused following the closure of all domestic facilities.

Expenditure on astronomy and space research would be reduced from the present £26m a year to less than £20m.

Expenditure on engineering would be increased from £11m to about £17m a year, and on research in the science fields from £21.1m to £22m, although concentration on the provision of new central facilities would result in a reduction of about one per cent a year in the value of university grants.

The council says the number of new postgraduate studentships

offered each year would be maintained at about 3,400-35 per cent less than 1975.

While reaffirming the value of the grant support system, it says there is a need for new arrangements to overcome current difficulties, and that specific proposals now being developed include:

● advanced fellowships for up to five years to allow a few outstanding young non-student staff to remain in academic research for longer than normally possible;

● rolling programme grants which would ensure that for particularly outstanding research programmes, workers would receive at least one year's notice of any major change in SRC support.

Science Research Council Annual Report, HMSO, £1.75.

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## Expansion has 'ignored society's needs'

by Judith Judd

Higher education has expanded at random with little or no assessment of society's needs, Dr Peter Clarke, director of Robert Gordon's Institute of Technology, Aberdeen, said this week at the institute's awards ceremony.

For those who started out in the Robbins era with naive expectations, undifferentiated and random expansion of higher education has led to grave and growing disillusionment. Employers in particular, and society in general, are increasingly critical of school leavers and the products of higher education.

Stimulated by ill-informed and often misguided demand, courses have been introduced without thought for the availability of jobs.

Comprehensive manpower planning and course provision should be based on consultations with education, industry, commerce, the professions, social organizations and central and local government. In its absence, many people in education had, in the last decade, advanced or allowed to be advanced on their behalf, any and all kinds of higher education as a good investment.

The Robbins Report had rejected manpower planning and disappointment with the poor return on the post-Robbins investment had led to revulsion against the view that higher education could be looked on as an investment.

Educationalists had a responsibility to ensure that boys and girls chose realistic subjects and received timely careers advice.

## Much research free science dean says

The public is getting a vast amount of university research as a free bonus, Professor J. M. Howie, dean of the faculty of science at St Andrew's University, told graduates last week.

The deterioration in staff/student ratios in universities meant that more and more research was being done voluntarily after normal working hours by people otherwise fully occupied in teaching and administration, he said.

The Government could never bring down staff/student ratios much further without bringing them below the level considered acceptable for a secondary school.

"We are, therefore, giving very near to the situation where society is receiving from the universities, at a reasonable price, a complete education service end, as an almost free bonus, a vast amount of valuable fundamental research."



Sarah and John Coakley: lecturer in origins and history of Christianity.

## Lancaster University gets two for the price of one

by Frances Gibb

Division of labour, a commonplace in the home for modern married couples, has now moved into the realm of work with the appointment by Lancaster University of a husband and wife to share one lecture-ship.

Mr and Mrs Coakley, each specialists in different aspects of Christian theology, applied separately for the post in the department of religious studies but said they would be prepared to share it if a suitable agreement could be reached.

Dr Eric Sharpe, head of department, said: "At first we were liable not to take the suggestion seriously. As far as we knew, no one had done anything like this before and we did not know how the administration was going to react."

In the event the pro-vice-chancellor, chairman of the appointments committee, felt the best solution was to make a joint appointment.

Mr Sharpe emphasized that the university was not trying to get two lecturers for the price of one. The department had taken care to ensure they did not have too big a teaching load between them, he added.

Mr James Coakley, 29, is studying early Christian traditions and working for a PhD on writing in Syria.

## Get more engineers into management—Robens

by Sue Reid

Less than 18 per cent of professional engineers and qualified scientists in Britain's engineering industry are employed in management, Lord Robens, chairman of the Engineering Industries Council, warned this week.

Speaking at the launching of a new Engineering Industry Training Board fellowship scheme designed to increase the number of manufacturing managers, Lord Robens said that this state of affairs was not satisfactory. While welcoming research he said that Britain needed to produce goods of a high quality that were saleable to the world as a whole.

The country had failed in allowing the development of research initiated in Britain to pass elsewhere, notably to the United States of America. Unless highly qualified engineers were put in charge of production there would be a continual failure to utilize the developments coming out of the research establishments.

He hoped the new scheme, which consists of 10 fellowships a year from 1977, would be a major step in promoting the thought among engineers that they must involve themselves in production as well as research. Firms in particular should recognize that they had an obligation to put forward the best of their employees for management.

The Amalgamated Union of Engineering Workers and chairman of the EITB, said the scheme was a positive, practical and pragmatic step towards channelling young able engineers into activities where their talents could be used to the greatest benefit of industry and the British economy.

The small number of good quality students entering schools of engineering in British universities had been cited as one of the contributory causes of the present malaise in the engineering industry. This had been exacerbated by the reluctance of engineering graduates to choose a career in industry, and of those

who did few were prepared to choose a career in management. The majority of graduates were concentrated in research, development and design, and the volume of research and development was a testimony to the quality of people involved.

But Mr Scanlon admitted that we were in a position to turn technological advances into wealth-producing products. Too often it is left to competitors to do this and our innovative capacity.

Each EITB fellowship will be an award equivalent to a salary of £5,000 a year in addition to a £18 months' leave of absence.

Britain's rigid educational system was to blame for the shortage of professional engineers, said Lord Robens. He said that the system was too inflexible and that it was necessary to have a more flexible system.

He warned of a national decline in the quality of engineering and the higher place the ship which while the top plans were being by the arts.

Teachers, by their own choice, had to be prepared to accept a reduction in their own status and to accept a very low level of acceptable entry qualifications of which took much more of students' interest and motivation.

A new qualification in pure sciences was being proposed by the Council of the National Academic Awards.

The course would be open to those with a technical background but it would be a joint venture with the departments of further education. Successful candidates would be awarded a Diploma in Management Studies with special honours in management for industry.

## Dismissed Fircroft staff college was over-governed

Fircroft College, the adult education college in Birmingham which closed for full time courses last year after the students banned the principal, was vastly over-governed and over-managed, according to former staff.

Writing in *Higher Education Review* the staff claim that the Fircroft Trust which owned the college had assets of £500,000 and that the Department of Education and Science provided 90 per cent of the running and capital maintenance costs.

The staff dismissed following a public inquiry into the running of the college, now blame this financial stability and the fact that the Fircroft trustees and governors were largely self-selecting for refusing change when it was needed.

They maintain that the mechanisms of resistance to change were a refusal to allow meaningful staff and student participation in the college's government and the style of management practised by Mr Tony Corfield, the principal.

The article analyses the student takeover of the college last year which ultimately led to the public inquiry and closure of full-time courses in 1975. It outlines the history of the college, founded by the Cadbury family in 1908, and examines the established curricula before the student takeover, and the curriculum introduced by the students themselves once the principal had been banned.

Of the established education programme the staff say: "The curriculum at the beginning of 1975 was in essence the curriculum of 1909."

Guides for sixthformers on choosing polytechnics

Two booklets advising sixth-formers how to apply for university and polytechnic admission and select a suitable degree course have been published by the Advisory Centre for Education. *Choosing a University* and *Choosing a Polytechnic* are available from 22, Trumpington Street, Cambridge, price £1.20.

with the contents updated to reflect the latest of the national objectives of the curriculum. It was decided that the curriculum should be voluntary.

"The authorities were generally hostile to this, and said, excessive change was not necessary. In fact, the curriculum was a mixture of old and new, and the curriculum was a mixture of old and new."

The question of how to select a student would have been a very difficult one to answer. All the staff would have been asked to answer the question of how to select a student would have been a very difficult one to answer.

The staff now say: "The curriculum was a mixture of old and new, and the curriculum was a mixture of old and new. The curriculum was a mixture of old and new, and the curriculum was a mixture of old and new."

Higher Education Review, published by the National Academic Awards, is available from 22, Trumpington Street, Cambridge, price £2.50.

Professor Peston to join Mr Hattersley's staff

Professor Maurice Peston, of the Mary College, London, is to join the senior special adviser to the Secretary of State for Education, Mr Peter Dainton, in the Department of Education and Science. Professor Peston was recently an adviser to Mr Patten for Education.

## Distaste for industry worries Mr Callaghan

by David Walker

Student reluctance to work in industry was identified by the Prime Minister as a source of national concern in his speech at Oxford this week.

He called for more technological and scientific teaching and new initiatives in the education of the 16-19 age group. But he also praised the work of academics in the adult literacy programme and spoke of the importance in trade union education of Ruskin College, where he was laying the foundation-stone of a new building.

Mr Callaghan's theme was standards in education and the public's concern about how schools and colleges were preparing young people for life.

Teachers had no exclusive rights in education, he said. "Public interest is strong and legitimate and will be satisfied. We spend £5,000m a year on education, so there will be a discussion. Parents, teachers, and learned and professional bodies, representatives of higher education and both sides of industry, together with the Government, all have an important part to play in formulating and expressing the purpose of education and the standards that we need."

Mr Callaghan then listed his worries about the educational system. It had been concerned to find that many of our best students who have completed the higher levels of education at university or polytechnic have no desire to join industry. Their preference is to stay in academic life or to find their way into

the Civil Service. There seems to be a need for a more technological bias in science teaching that will be towards practical applications in industry rather than towards academic studies.

"Is there not a case for a professional review of the mathematics needed by industry at different levels? To what extent are these deficiencies the result of inefficient communication between schools and industry? Indeed how much of the criticism about basic skills and attitudes is due to industry's own shortcomings rather than to the educational system? Why were there 30,000 vacancies on science and engineering courses in our universities and polytechnics last year while the humanities courses were full?"

Mr Callaghan warned there could be little hope of more resources for education in the foreseeable future. A list of priorities had to be made and he recommended investigation of the aims of "informal instruction" in schools, the strong case for the so-called curriculum of basic knowledge and the need to improve relations between industry and education.

Another problem, he said, was the examination system. He hinted that the Government would reject the proposals from the Schools Council for the curriculum on normalising O levels. Mrs Williams, Secretary of Education, was, he added, examining ways of attracting talented young people into engineering and science subjects and efficient ways of using resources for the 16 to 19 age group.



Mr Callaghan and protesters at Ruskin College, Oxford.

## British science squeezed in new finance crisis

continued from page 1

It seems unlikely, however, that even if such measures were taken, they would be sufficient to cover the SRC's estimated deficit in the current year. Immediate closure of the two accelerators, for example, would only save about £434,000, and the case of Nimrod would meet considerable opposition from scientists.

The council may, therefore, be required to take further measures, such as a reduction in the number of new research grants from October to the beginning of next year. The possibility of having to decide that no new research grants will be awarded in the next financial year has already been discussed by some of the council's members.

Regarding the subscriptions to international bodies, some physicists feel that it might be possible to make the required savings in this way.

Further cuts in the nuclear physics budget have come as a particularly frustrating time for physicists, at present facing the exciting possibilities opened up by the discovery of a new particle for which Professor Murray Gell-Mann and Professor Samuel Ting were this week awarded the Nobel Prize.

CVCP asks for fees meeting

The Committee of Vice-Chancellors and Principals has asked for a meeting with Mrs Williams, Secretary of State for Education and Science, to try to persuade the Government to lower the proposed level of student tuition fees for 1977-78. Sir John Habakkuk, chairman of the CVCP, said that the committee was concerned that a major change in the basis of university finance, which has been made

because of the need for economies, without considering the wider implications for universities.

The Council of Local Education Authorities is also opposed to the Government's proposals and is to express its objections when it meets Mrs Williams next month.

The Government has proposed for 1977-78 that the undergraduate fees would be £550 and all postgraduate fees £750.

## Exam boards greet PM's 'reprieve'

University-based schools' examining boards this week greeted Mr Callaghan's Oxford speech as "a reprieve" from the threat to their existence posed by the Schools Council's plans.

Officers of the boards said they had to wait for the official Department of Education pronouncement on the Schools Council's controversial plan for O levels, but they generally felt the Prime Minister's words were a vindication of their work.

Dr Frank Wild, general secretary of the Cambridge University Local Examinations Syndicate, said preserving standards had always been his board's business. He added that shelling the Schools Council O level scheme would not solve the problem of children at 16 being taught for both O level and the Certificate of Secondary Education.

Other boards predicted moves to stop the proliferation of examination subjects and to create a common core of subjects surrounded by a small number of options to make a total examination package of perhaps 20 subjects. Mr A. R. Stephenson, of the London University board, hinted at the resurrection of the old School Certificate, last used in 1950 with its compulsory mathematics, English language, modern languages and science.

The Prime Minister's words seem likely to steel the arms of DES ministers and officials who want to tidy up the examinations system.

In addition a case had been put within the department for a comprehensive review of all 16-plus examinations from the Certificate of Extended Education to Training Services Agency courses, City and Guilds Examinations and the various national certificates.

Other educational interests fell in with Mr Callaghan's call for a national debate on standards and the quality of education. Dr Arthur Suddaby, chairman of the Committee of Polytechnic Directors, pledged effort to find ways of attracting more able students into manufacturing industry.

Mr Laurie Sapper, general secretary of the Association of University Teachers, said the Prime Minister's speech was a welcome sign that increasing tuition fees would discourage industry from sponsoring students on technological courses and make universities scramble for students in humanities.

## 'Suspend agreement on occupations'

A demand for the suspension of the new agreement on student occupations between the Association of University Teachers and the National Union of Students came this week from the Lancaster AUT branch.

A 57-strong meeting passed a motion associating the lack of confidence in the executive for entering into it and publicizing it without prior consultation, particularly as it appeared to contravene direct action.

The meeting called on the national executive to suspend operations of the agreement until it had been considered by local branches and their views had been reported to the AUT council. If the executive refused, the branch would seek the cooperation of other local branches in obtaining its resignation.

Mr Laurie Sapper, general secretary of the AUT, said that any decision from branches would be considered by the executive at its next meeting in December.

## NEXT WEEK

P. A. Reynolds: universities and society

Energy conservation in universities

Briefing on academic publishing

Inset: philosophy books

The future of Homerton College, Cambridge

The state of learned societies

## OU places rejected by nearly 30 per cent of applicants

by Sue Reid

Nearly 30 per cent of the applicants offered places by the Open University in 1977 have rejected them, an increase of five per cent over last year. This might mean that the university will not meet its target of 20,000 admissions.

The latest figures, released by the university this week, show that 7,600 of the 26,300 offers made for 1977 have been turned down. Last year 22,355 students were offered places for a 1976 start and 5,355, about 24 per cent, rejected them.

Mr Tez Quirke, the Open University admissions officer, said this week: "It is easy to blame the higher fees but that is too simple an answer to be complete. We shall have to ask people directly why they have changed their minds."

The university maintains that there is always a percentage of people who decline offers because of changed circumstances. But the numbers of offers placed for 1977 should have been sufficient to fill the 20,000 places available.

Last year 23,000 offers were made to fill 17,000 places. Acceptances reached 16,900 and the 100 spare places were then offered to potential students on a reserve list. This year acceptances have fallen short by 1,300.

A round of second offers will be made in an effort to fill the places but there will not be time to make a third round. If there is not suf-

ficient response from the second offer, foundation courses may not reach their target numbers even though there are still 32,000 OU applicants waiting.

From 1977 foundation course fees will cost £15 a year and summer school fees £55. Although the university is not certain that this has affected the demand that this cost of taking a foundation course next year, including book purchases, is expected to reach £120.

Research has shown that in 1974 25 per cent of people making initial inquiries about an Open University course decided not to apply because the financial commitment was too great. However, a survey recently completed by Mrs Sue Blacklock, of the university's Survey Research Department, has shown that only 2 per cent of the actual students in 1974 experienced severe hardship in paying tuition fees and other expenses. A further 29 per cent found it fairly difficult to pay.

When the responses of all students receiving full fee aid are excluded the survey figures suggest that in 1974 one in three students experienced difficulty finding the money for their tuition fees and more than 25 per cent claimed difficulty in paying summer school costs.

Sixteen per cent of all students in 1974 received full aid with course tuition fees, for example from their local education authorities or employers.

## Closer community links urged

continued from page 1

as a proper area of their work and the community would only derive full benefit from the university if staff devoted more money and time to extending its work.

The proposed Community Resource Unit, with both academic and community representation, would develop research, prepare reports and provide consultation services to the local community. It could be funded initially by the region, the Scottish Office and the Social Science Research Council.

A second major proposal is that the university should encourage a steady increase in the number of mature students.

Almost 95 per cent of first degree students in 1972 were under 22, the report says. Waiver for mature students is granted only in exceptional circumstances and only a handful of students are admitted each year without the minimum entrance qualifications. The commission recommends a study estimate demand from such students.

The emphasis is on greater flexibility both in selection of students and in courses offered, and on more cooperation between educational institutions.

It proposes a joint academic board for the region which would encourage transfer and cooperation between different higher education institutions and the acceptance of each other's credits.

There should be more part-time study, which, it says, has declined from comprising 49.8 per cent of places in post-secondary education in 1963-64 to 30.4 per cent in 1971-72.

In its role as employer, the university should draw the attention of all its employers to day-release facilities and might pioneer sabbatical or study leave for non-academic staff.

On the curriculum, evidence was considered claiming that courses were becoming increasingly specialist and only one third of students embarked on vocational courses. Nearly one half of Scottish graduates went into postgraduate work.

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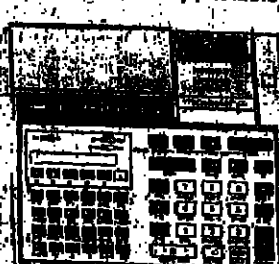
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George Drummond, several times Edinburgh's Lord Provost, was instrumental in founding the medical school.

Edinburgh's medical school is celebrating this month. Judith Judd reports

## Age-250. Health-excellent

It was 250 years ago this month that the ambition of a Scottish surgeon was realized and a great medical school was founded in Edinburgh. John Munro had aimed for the creation of an Edinburgh school similar to the one he had seen in Leiden, but it was his son, Alexander, who was appointed "professor of anatomy in this Clitie and Colledge" by the town council in 1720.

On October 12, 1726, the Senate of Edinburgh University confirmed the appointment of four professors in medicine and noted that they would now conduct examinations for medical degrees.

At first the number of students receiving instruction was tiny. Only 36 graduated from the new faculty in the first 20 years of its existence and it was not until 1818 that the number in any one year was more than 100. The peak year was 1923 with 351 graduates.

Before the Second World War all qualified applicants could enter the school. "Students who intend to enter the faculty of medicine are asked to send their names to the dean", say the calendars.

Now 156 students a year are admitted from 2,000 applicants, over 500 of whom come from overseas. Since 1926 there have been 7,697 graduates, 1,900 from outside Great Britain and Ireland.

In 1869 Edinburgh became the first British university to admit women medical students but the move remained controversial and



1929 caricature of Robert Knox demonstrating anatomy.

no woman was allowed to graduate in medicine until 1894.

Classes for the nineteenth-century student were very different from those today. A class of more than 500 was not unknown and in the early days all teaching was done in Latin.

Professors were appointed young. The second Alexander Munro was appointed at the age of 21. By the end of the eighteenth century six of the present chairs of the Medical Faculty existed. In the nineteenth century five more were added and the chair for military surgery lapsed in 1856. The big growth to the present 33 departments and 37 professorships has come this century.

The early curriculum emphasized bedside or clinical teaching under the influence of Professor John Rutherford, who had studied at Leiden. But in Physiology no practical instruction was given until 1862. Practical work in pathology began in 1870.

The Royal Public Dispensary was set up by Andrew Duncan

in 1776 and medical students worked in the city's dispensary. Between 1705 and 1801 graduates were awarded the M.B., the primary medical degree. Since then, the bachelor degree has been M.B., then M.D., and since 1893 M.B., B.S.

Until 1832 the final examination was viva voce and a student often had to spend a year in a hospital before taking part in a written examination. More recently postgraduate work has been developed. In 1944 the Edinburgh Postgraduate Board for Medicine was formed as an advisory committee to the University Court and the school has since built up an international reputation for its postgraduate work.

To mark the anniversary a series of events would be held in the number of candidates who decided not to accept a university place because they were not prepared to be "boarded", but the cost would be out of proportion to the saving, they said.

A graduate's most effective contribution to society could not generally be determined before he entered university. To commit an individual in advance to particular employment could often prove contrary to his and the community's long term interests.

They were against this idea. The direct cost would be in the number of candidates who decided not to accept a university place because they were not prepared to be "boarded", but the cost would be out of proportion to the saving, they said.

A graduate's most effective contribution to society could not generally be determined before he entered university. To commit an individual in advance to particular employment could often prove contrary to his and the community's long term interests.

Caricature of Joseph Black, professor of chemistry and mathematics, discoverer of carbon dioxide and latent heat.



## BRIEFING

Annabel Ferriman looks at Mrs Williams's 1969 ideas on university economy

## Shirley's thirteen



In September, 1969, Mrs Shirley Williams, minister of state for education, suggested to some members of the vice-chancellors committee and the chairman of the University Grants Committee ways in which the higher education system could be reduced. These later became known as the "13 points" and the CVC replied to them in April, 1970.

Both Mrs Williams's suggestions and the universities' reply were prompted by new projections of student numbers in the 1970s—projections which have since been revised downwards. However, at the time both parties believed they would have to consider

seriously various economies to cope with rapidly increasing numbers.

Nevertheless, the universities opposed nine of her suggestions. They only favoured a possible two-year higher education course, the more intensive use of university buildings, more sharing of facilities and more forms of loan-financing for student residences. These four points have all come into effect, along with a more restrictive policy on overseas students and a further increase in student/staff ratios. Shown below are the universities' response and the progress the 13 points have made.

### 1. A reduction or removal of student grant aid coupled with a loan system.

#### Universities' response

The universities were against this. The drawbacks were essentially social, and because they would be discriminatory, for example in their impact on students from poorer families and on women students, they were naturally unwelcome, they said.

#### Progress

Undergraduate loans have not been introduced either. A system similar to the one the universities said they might find acceptable, however, was proposed in 1974 by the Education and Arts subcommittee of the House of Commons Expenditure Committee who suggested a new system of financial support for postgraduate research which would force students to seek loans to "top up" mandatory state grants.

### 2. A similar policy at postgraduate level.

They thought there might be a place for such loans if they were used to supplement existing arrangements. The arguments against loans did not apply with the same force in the postgraduate field, where in some subjects a graduate qualification related closely to an increase in the salary which could be commanded, they said.

Postgraduate loans have not been introduced either. A system similar to the one the universities said they might find acceptable, however, was proposed in 1974 by the Education and Arts subcommittee of the House of Commons Expenditure Committee who suggested a new system of financial support for postgraduate research which would force students to seek loans to "top up" mandatory state grants.

But this was not generally true and whereas there might be advantage in using loans to supplement present arrangements, they would be very concerned at the prospect of graduate studies and research being impeded by the abandonment of any existing provisions for support.

### 3. A more restrictive policy on admission of overseas students.

They were against such a restriction, pointing out that students from abroad only accounted for 4 per cent of undergraduate numbers and that the undergraduate and postgraduate total had remained almost stationary since 1966-67, which meant that they formed a steadily diminishing proportion of the students in British universities.

The admission of overseas students has not yet been restricted but in July the Government recommended that numbers in higher and further education should remain at about their present level of 65,000,70,000.

Scholars from overseas had their own special contribution to make and any substantial diminution in the proportion would be "educationally impoverishing."

As for sharing with non-university institutions, they were willing to explore the possibilities, but were sceptical about what could be achieved in that direction, "especially if the demand from the other institutions were to be concentrated upon the sharing of certain basic university facilities, which may already be used to capacity."

### 4. Grant-aided students should enter specified kinds of employment for a period after graduation, which might reduce applications.

They were against this idea. The direct cost would be in the number of candidates who decided not to accept a university place because they were not prepared to be "boarded", but the cost would be out of proportion to the saving, they said.

The requirement that grant-aided students should enter specified employment has not been introduced.

A graduate's most effective contribution to society could not generally be determined before he entered university. To commit an individual in advance to particular employment could often prove contrary to his and the community's long term interests.

### 5. The greater use of part-time and correspondence courses as alternatives to full-time courses.

Any part-time option could best come at postgraduate level because such courses for school leavers were no substitute for full-time study, they felt. The development of correspondence courses was not a useful or practical step since such courses would be a form of education different from that which traditional universities existed to provide.

Has not been done. The number of undergraduates on part-time university courses has declined considerably. In December, 1969, there were 5,028 part-time undergraduates out of a total of 186,217, or 2.7 per cent. In December, 1973 there were 3,405 out of 200,078, or 1.6 per cent. Use of correspondence courses at university level has only increased through the Open University, which now caters for about 50,000 students.

### 6. The possibility that the most able should have the opportunity to complete a degree in two years.

They were against this proposal to this idea. "Whatever the ability of a student it would be fallacious to suppose it possible in two years to achieve the same result as is achieved by the conventional three-year (four in Scotland) honours degree course," they said. Education to honours degree level involved much more than the accumulation of a volume of factual knowledge; it required the development of a style of thinking and a critical faculty essential to academic enquiry. To achieve this in three years was a tribute to the student's intellect and the quality of the teaching, not a reduction in their length.

This has not been permitted.

### 7. The possibility of some students not taking three-year courses but different courses lasting only two years, leading to a different qualification from traditional degrees.

Further thought could be given to the idea, they felt. Some thought that new courses would be offered in colleges of education or liberal arts colleges, and converted through another one of two years study to a degree.

A two year course leading to a different qualification from the degree has been introduced in the shape of the Diploma in Higher Education. It was dropped in the James Report on teacher training in January, 1972, and the first two courses were moved in 1974 at North East London Polytechnic and Bournemouth College.

### 8. Possibly inserting a period between school and university to give school leavers a better opportunity to consider whether they wish to take some form of higher education.

They were against a compulsory year off. They thought it would save costs in discouraging poorly motivated students. But against this would have to be set the academic disadvantage to others and the additional social cost of increasing a year, say, of every graduate's working life.

A year off between school and university for all students has not been introduced.

### 9. The more intensive use of buildings and equipment, and the possible re-organization of the academic year.

They were against a reorganization of the academic year, but were willing to discuss further the more intensive use of buildings generally.

The academic year has not been reorganized but buildings and equipment are probably used more intensively now than before, and will be used still more intensively in future because of the low capital grants in recent years (for 1975/76, 1976/77 and 1977/78 they were £15m, £8m and £4m respectively) and the considerable growth in student numbers (from 219,000 in 1969 to 263,000 in 1975).

A reorganization of the academic year would mean that the range of activities normally undertaken outside teaching terms would be restricted. These included postgraduate and post-experience courses, Open University sponsored schemes and academic and professional conferences which, it was felt, should continue to develop.

On the more intensive use of buildings it was thought that an expansion of numbers in the 1970s could be achieved with a lower rate of increase in capital expenditure per student than in the 1960s.

### 10. More sharing of facilities between adjacent institutions.

They were willing to increase the sharing of facilities with neighbouring universities where the need and opportunity arose, and were aware of the need to avoid unnecessary duplication of specialized subjects. They pointed out there were already many examples of collaboration not least in library services and expensive equipment.

Sharing has been increasing, according to a CVC report produced in November, 1973. Combining committees for promoting links with local institutions have been set up by, among others, Bristol, London, Keele, Lancaster, Leicester, Liverpool, Manchester, Newcastle, Sheffield, Southampton, Surrey, Warwick and Aberdeen, the report said.

It pointed out that the universities as a group were "net" providers of assistance rather than receivers and had contributed much to the development of institutions in the public sector, but complained of serious disincentives to sharing facilities, including providing for new polytechnic developments without regard to existing and spare capacity in some university subjects."

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### 11. More home based students.

They were against an increase, for several reasons. It had limited application, because many universities were located in isolated areas, so there was little possibility of recruiting more students from the districts within daily travel.

The number of home based students as a proportion of the total has declined since 1969, when it was 38.873 out of 219,000, or 17.7 per cent. In 1973 it was 40,542 out of 251,226, only 16.1 per cent.

They also pointed out that capital grant for residential accommodation of the traditional kind had fallen sharply and the emphasis had changed to self-financing schemes, so the saving would be small.

### 12. The development of student housing associations and other forms of loan-financed provision for residences.

The universities greatly favoured the development of student housing associations and other loan-financed provision, but warned that the "problem associated with setting them up were considerable. There was difficulty in obtaining subsidies theoretically available from public sources, and with financing through commercial loans the current experience was that the interest level made it virtually impossible to mount a successful loan-financed scheme without some kind of subsidy or supplementary grant.

Both housing associations and loan-financed provision for student residences have increased since 1969. In 1970 the UGC announced that it would increase to 100 per cent grant aid for student residences and for several years only paid about 25 per cent of their cost. It now stands at about 50 per cent.

Student housing associations developed steadily until the 1974 Housing Act, which laid down that housing associations should not provide housing for just one section of the community. Since then many associations cater for all young single people.

The National Union of Students is pressing local authorities to provide more accommodation and some cities, such as Newcastle, Liverpool and London have offered some of their own popular flats.

### 13. Some further increase in student/staff ratios.

They were against an increase. The intensive teaching methods of British universities were not as expensive as they seemed, they said, because they made possible three year degree courses, the shortest in the world, and resulted in a very low failure and dropout rate.

It is hard to determine precisely what the student/staff ratio is this year, or last because of the delay in the production of statistics. It improved between 1969 and 1974, from 8.2:1 to 8.0:1, but is likely to have deteriorated since.

The ratio had, moreover, been increasing in the past few years, and was worse in many of the new polytechnics and colleges of education. Finally a low ratio was necessary to enable staff to undertake research.

A UGC spokesman said that when the figures are released they would probably show a deterioration to 8.4:1.

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## TALKING POINT

### We should ensure that women can take part in management

Some lecturers have been concerned by the difficulty of maintaining a balance between the needs of male and female students. But a more serious problem is aggravated by education by the fact that given our vocational technical bias and male dominance in the working trades most of our staff are very likely to be men. Perhaps this in turn frightens off those women who might consider teaching non-technical subjects; in such colleges I've no doubt that Michael Green's recent article on "Coarse Teaching" in the *Times* must have frightened off a few. But a more pressing problem than merely maintaining a balance is to make sure we have enough women in senior management posts.

Recently we had over 80 applicants for a senior post which included only four from women and even those were not the classic career characteristics of today's female teacher. Unfortunately these characteristics don't help the few women who do have the confidence to apply for promotion.

The most common is that of a gap in service arising out of the birth of children; in spite of maternity leave most women seem to take lengthy breaks before returning to teaching. Of course while the wife is away from her career the husband is often making strides with his which put him well ahead by the time she returns.

The situation is then frequently aggravated by the fact that as the husband moves around the country on the promotion ladder it is necessary to take whatever job she can pick-up in the area. Very often these are well below her proper capacity and do not provide the personal development which gives necessary confidence when seeking higher jobs. In fact when the husband has settled in one area and a large extent of her curriculum vitae can look a bit like a curriculum vitae to the average male.

Usually it will also be rather bare in that she will have found it difficult to attend refresher courses, more school activities and gain additional qualifications while working and will often have lost a good deal of confidence in her own ability to take a responsible post.

More must mean worse if in pro-

A page open to all those who feel they have something to say on topics of interest and concern in higher and further education

## Systems of language tuition tongue-tied

As the summer sun loses its heat further education colleges entice us with an impressive range of evening class options. Foreign languages remain popular, revealing, perhaps our deep national yearning for the same ready tongue abroad as foreign tourists here. Yet how many of these members will continue their studies beyond November?

The annual exodus from evening language courses has prompted us to consider whether the present provision is wholly satisfactory. Many beginners, for example, are discouraged to find themselves enrolled in the same class as students already possessing a basic knowledge of the language; the latter find the pace of a first year group too slow.

Second and third year students are frequently taught together. Leisure-time linguists, wishing merely to dabble in a foreign language are often discouraged by the students seeking a qualification. Many courses do not proceed from year to year towards a definite goal: often they lead nowhere.

The insistence of local education authorities upon numbers as a criterion of class viability encourages the grouping together of students of varying abilities, often with totally different aims. In an attempt to cater for widely differing needs many language teachers struggle to divide their attention evenly between students. Indeed, one energetic German teacher endeavoured to conduct a small O level group and a larger beginners' class in adjoining rooms within the same two-hour session.

Satisfactory teaching is, of course, impossible within such heterogeneous groups, and the policy of amalgamation only aggravates the problem, leading to dissatisfaction and the loss of enthusiasm of many otherwise enthusiastic enrollees.

At present, too, there appears to be insufficient regard for the level of study required by many evening class students and their relative seriousness of purpose. A class of five-one-year A level French students—two seeking college entrance—was closed on the grounds of inadequate numbers, while an elementary "Conversational Italian" group continued long after it had shrunk below 10. It is possible to see how the respective merits of such contrasting groups should class side be the prime concern.

Language courses based on tourist situations are frequently offered to evening students, and the mechanical learning of stock phrases at first provides pleasure and satisfaction. Beyond this level, however, lies the cognitive stage—that point from



which further progress cannot be made without students getting to grips with grammatical rules. The more this is concealed, the more confused they become.

"Situational" courses, which seek to immerse learners in the foreign language, quickly cause beginners to founder, often to withdraw. Native speakers, especially, are apt to set too fast a pace. Moreover, they do not always control the introduction of new elements in the same gradual way as non-native teachers, whose own language-learning experience enables them better to comprehend and elucidate their students' problems. Many, attracted by the idea of a conversational class, are swiftly overwhelmed by a native teacher's faultless command of a tongue which to them remains an enigma.

Learners need to feel at ease and secure with the method adopted in their course. They require precise points of reference and simple, systematic progression. Grammar is not as irksome as is often feared—particularly for those trained at school to have some understanding of the way language functions and who do not appreciate the apparent reluctance of teachers to offer direct grammatical explanations.

Happily, many newer teaching materials combine the attractiveness of filmstrips and tapes with a carefully structured approach. In "Teaching Foreign Language Skills" Wills Rivers maintains that a place must be found for both habit formation and the inculcation of rules: "At the level of an adult or undergraduate foreign language student, students will be mature enough and have sufficient formal educational experience to undertake a systematic study of the structure of the language after they have acquired a certain skill in manipulating the most frequently recurring elements and in expressing their meaning in simple utterances."

Pattern drills, the author suggests, can be extremely valuable, involving use of reference words and sources; and the use of grammar and syntax where the student is required to use the language in a controlled manner. The main problem with presenting the language in this way is the answer to the recognized shortage of student housing. The cost of the language is high, and the value of the language is high. The language is a valuable asset, and the cost of the language is high. The language is a valuable asset, and the cost of the language is high.

but should not be regarded as an end in itself. It is a means to an end, and the end is a better understanding of the language. It is a means to an end, and the end is a better understanding of the language. It is a means to an end, and the end is a better understanding of the language.

Students need a clearly defined target and syllabus of work. This no public examination is not a target, but a syllabus of work. This no public examination is not a target, but a syllabus of work. This no public examination is not a target, but a syllabus of work.

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## Lodgings 'failure' by UGC

Brian Salter argues that lack of foresight at the UGC has contributed to the accommodation problems of universities

A. the accommodation officers of universities throughout the country embark on their annual task of trying to force quarts of students into put put of accommodation, it is a legitimate time to ask what the position of the University Grants Committee is, and has been, on this issue.

At the time of the burgeoning university expansion 15 years ago the residential situation faced by the UGC was less than attractive. In 1961-62 about 20,000 students had lived at home with their parents, making 42 per cent of all students at university (Table 1). By 1961-62, however, while total numbers had doubled, the number at home had remained the same, thus reducing this proportion to 20 per cent. Moreover, the proportion of students in colleges had increased from 28 per cent in 1961-62 to 35 per cent in 1973-74.

It was therefore inevitable that the majority of the increase in student numbers should be accounted for by the "lodging" category—that is, the open housing market—where students were, and are, in

economic self-indulgence in the building of residence became politically unacceptable. With no alternative and cheaper residential policy in sight, the "two-thirds norm" rapidly became an unworkable with no real chance of being fulfilled. (Table 2.)

Thus of the total increase in university numbers of 69,263 between 1961-62 and 1966-67, 46 per cent were housed in university-owned residence and 39 per cent went into lodgings. This, as the UGC succinctly put it in 1967, "falls a long way short of the ideal enunciated in earlier reports".

Yet the committee can scarcely have been that surprised. The steadily declining priority that was accorded to residence in the UGC building allocations, (Table 3.)

As more students poured into the universities, so the residence allocation as a proportion of total building allocations was progressively cut; an interesting idea, but scarcely one which has been used as an example of greater policy coordination by the UGC.

On the contrary, it seems a further illustration of policy abdication on the UGC's part. Indeed, it admits in its 1973-74 report that it had to adopt "a strictly pragmatic approach to the provision of residence".

By the late 1960s the UGC was, not unreasonably, getting seriously worried about the situation. It had been forced to restrict from its original position that residence provision should be linked to the rate of expansion, it was now being faced with the less-than-gratifying fact that it had been right.

In its 1968-69 annual survey the UGC noted that there was very little provision for student residence in the 1970-71 and 1971-72 planned building starts. It commented: "The committee was very conscious that the provision of residential accommodation was likely to be a major problem in the 1970s."

Although repeated "crises de coeur" of this nature may not be intrinsically wrong, they do not exactly tally with the idea of the UGC as a "strategic planning agency" as suggested, for example, by Lord Wolfenden (THESE, April 1968) that more or less identical statements were being made by the committee ten years earlier.

The UGC's response to this situation was increasingly to shift its support after 1968 from fully grant-aided to "loan-financed" schemes.

Table 1: Distribution of Types of Student Residence 1938-39 and 1961-62

| Year    | University | Owned Residence Lodgings | Home | Total | N       |
|---------|------------|--------------------------|------|-------|---------|
| 1938-39 | 25%        | 33%                      | 42%  | 100%  | 50,002  |
| 1961-62 | 28%        | 32%                      | 40%  | 100%  | 113,143 |

Table 2: Distribution of Type of Student Residence 1961-62 and 1966-67

| Year    | University | Owned Residence Lodgings | Home | Total | N       |
|---------|------------|--------------------------|------|-------|---------|
| 1961-62 | 28%        | 32%                      | 40%  | 100%  | 113,143 |
| 1966-67 | 35%        | 47%                      | 18%  | 100%  | 182,406 |

Table 3: Total UGC Building Allocations, Residence Allocations and Residence as a Percentage of Total, 1962 to 1966-67

| Year    | Total Buildings (Allocation £m) | Residence (Allocation £m) | Residence as % of Total |
|---------|---------------------------------|---------------------------|-------------------------|
| 1962    | 24.9                            | 6.7                       | 27%                     |
| 1963    | 30.5                            | 8.1                       | 26%                     |
| 1964    | 30.5                            | 12.5                      | 41%                     |
| 1965-66 | 46.1                            | 7.5                       | 16%                     |
| 1966-67 | 39.3                            | 5.3                       | 13%                     |

Table 4: Student Residence Placed started FINANCIAL YEARS (1 April to 31 March)

| Year                                               | 1967-68 | 1968-69 | 1969-70 | 1970-71 | 1971-72 | 1972-73 | 1973-74 | 1974-75 | Total  |
|----------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| Fully grant-aided schemes                          | 3,454   | 970     | 1,876   | 274     | 618     | 9,227   | 9,630   | 4,078   | 39,220 |
| Loan-financed schemes                              | 1,453   | 2,153   | 2,233   | 993     | 313     | 641     | 191     | 483     | 8,472  |
| Schemes otherwise financed (with UGC contribution) | 4,913   | 3,123   | 3,791   | 3,393   | 10,159  | 10,274  | 4,269   | 4,403   | 46,523 |

Source: UGC, University Development 1962-67, Cmnd 3820, Table 29, p. 153.

Source: UGC, University Development 1962-67, Cmnd 3820, Table 29, p. 153.

## GILBERT RYLE 1900-1976

The death of Gilbert Ryle earlier this month has left an immense gap in the philosophical scene. He was one of those figures who, when they die, compel one to look back and reflect on the history of the subject.

In his case it is easy to see how he helped to change its course. In the first place he was a powerful influence in revitalizing philosophy in Oxford, which had been virtually dead from the beginning of the century until the 1920s (Gilbert Ryle came up to Queens in 1919, and became a lecturer in Christ Church in 1924). From the very beginning of his career as an undergraduate, he determinedly worked to open the subject as practised in Oxford to the influence of the world outside.

Oxford in the 1920s was inconceivably parochial. Gilbert Ryle not only took the then spiritually immense journey to Cambridge to find out about Russell and Moore, but he went to Germany to find out about (and later lecture on) Brentano, Husserl and Heidegger. Much later, he was always insistent that undergraduates and students should talk to each other, not work with their heads in books; and that teachers should meet their students at conferences and read each other's writings. (And so, after the war, *Mind*, under his editorship, became almost disconcertingly international.)

Throughout the 1920s and 1930s Ryle became increasingly interested in questions of meaning: it was the logical rather than the mathematical aspects of Russell's work which fascinated him. It was not interest in perception which drew him to Cambridge (the subject which attracted the first adventurer from Oxford, R. H. Price); it was rather the question how logic and language related to perception, and to other features of the world; how it is possible to talk about the world, and how the difference between getting things wrong and getting them right is conceptually wrong?

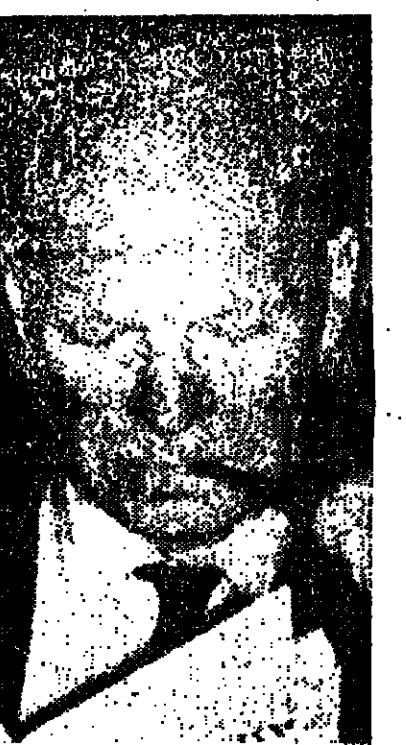
Thus his early desire for the philosophy of Wittgenstein; but, characteristically, never became a blind disciple of Wittgenstein or of anyone else. Spending of his visits to the Moral Sciences Club in Cambridge, he was a man of his own mind, and his own words. He was a man of his own mind, and his own words. He was a man of his own mind, and his own words.

After a war spent in the Welsh Guards, Ryle came back to Oxford and began the second great influential part of his career. In 1949 he published *The Concept of Mind*, the giant among his own works, and one of the most important books in philosophy to be published this century. It was a serious attempt to apply the method which he had been concerned with since the 1930s, to one large traditional area of philosophical enquiry, namely the philosophy of thought and action.

The method was, he thought, a matter of logic—to show up a peculiar kind of logical nonsense, by exposing a difference in types of categories between subjects of discourse which might seem to be of the same type. Such confusions occurred when language appropriate to one type of subject (for instance, actions and their actions in space) was supposed to apply to things of a different type (minds, which, on account of this logical error, seemed somehow to be "inner" bodies, occupying a "mythical" inner space).

The influence, not only of Russell and Wittgenstein but also of Ryle's early readings in Husserl and the phenomenologists, can be detected in the book. Above all, it is original, fresh, exciting and enormously readable and forceful. All the excitement of philosophy in Oxford after the war, all the sense of new frontiers to be opened up, new subjects to be discovered, still comes from its pages, packed as they are with arguments, jokes and insights.

Meanwhile, in his capacity as youthful professor, Ryle was becoming more and more involved in the actual practical management of a growing subject. He was almost solely responsible



Professor Ryle: His *Concept of Mind* is one of the most important books on philosophy published this century.

for the new postgraduate degree of BPhil, invented first for philosophy and later taken on by other faculties as well.

The point of this admirable degree was to give graduate students a chance to learn more philosophy in general, and to learn it in the only proper way, by discussion and seminar, without having to choose one narrow subject for research, to work on it by themselves for a thesis. The BPhil is examined by means of papers like Finals papers in a wide-ranging choice of subjects, and for two years students can work at their own speed, and within a broad area, at what interests them most.

As one, I think, of the second set of BPhil students ever, I can testify to the immense exhilaration of study in such a relaxed, yet mildly structured, course. And all the time Ryle urged students to talk, discuss, form philosophical societies and write papers for them, above all to explore and enjoy the subject. He was, as he himself put it in a characteristic phrase, a source of "unacademic unacademicity" to his graduate students. Nothing better could be conceived.

His avuncularity in fact showed itself in many ways. His interest in the actual mechanics of studying philosophy in Oxford never faltered. He was, for instance, largely responsible for getting a subfaculty building, with a common-room, library and seminar rooms for the growing number of philosophers. But more widely, the values he held were themselves those of an old-fashioned uncle. He was in some ways undoubtedly old-fashioned, though for ever free from either pomposity or experience.

He greatly liked and believed in families; he thought (in a very rambling fashion) of the nursery, though by no means a child, that some things fit others unfit, to be discussed. He liked games; he liked children. He loved style and wit, but not gossip. He hated the vague the numinous and the ecstatic. (He regarded moral philosophy as a feeble branch of the subject, something as worse, and the philosophy of education as the last refuge of the incompetent.)

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Mary Warnock

## CRUISE AWAY THIS WINTER TO INDIA, THE SEYCHELLES AND AFRICA

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## Postgraduate literary courses

Since 1961-62, the year studied in the Robbins report, there has been a considerable expansion of taught postgraduate courses leading to an MA degree. This increase is in accordance with recommendations made in the report, which urged that the concept of postgraduate work should be broadened to include the study of literature, and that the study of literature should be broadened to include the study of literature.

American literature, Victorian studies, nineteenth and twentieth century novel, English literature background, 1830-1875, modern German drama, twentieth century drama, French theatre studies, presumably meet that need. But the report also criticises the "general lack of formal training" and I find it regrettable that more attention was not, and still is not, given to formal training.

There are a few MA courses which include such topics: for instance, in French at Kent which, since 1962, has included a year of postgraduate work in French at Birmingham where one of three courses is given to practical work

ing, or the disciplines of research, when devising new MA courses. The *Schedule of Postgraduate Courses in United Kingdom Universities* lists under courses in English, two in bibliography and textual criticism, one at Leeds and one at Sheffield; while there is only one in medieval languages and literature, namely in Romanist in the School of Slavonic and East European Studies in the University of London.

It is not necessarily advocating an increase in the number of those dealing solely with the bibliographical side of the literary critic's training. There should be I suggest, more opportunity within existing literary courses to study as a compulsory part of postgraduate work such topics as the rudiments of editing, bibliography, bibliography, textual criticism and the history of critical theory and practice.

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## Academics are becoming more 'aware'—Lipset

Social criticism may be increasing among American academics, although support for militant tactics has diminished sharply since 1969, according to Professor Seymour Lipset of Stanford University. Professor Lipset has been undertaking major surveys of the views of professors and assistant professors in American universities.

In an introduction to a new edition of his *Rebellion in the University*, Professor Lipset says physical calm on campus may have masked public awareness of the growth of what Lionel Trilling called "an adversarial culture". In the past six years university professors had become "more accepting of egalitarianism and counter-cultural values, more critical of the university but less supportive of militant or illegal tactics to achieve political ends".

Those voicing strong agreement with the proposition that "there can be no justification of using violence to achieve political goals" in the United States rose from 47 per cent to 61 per cent during this period. "The more prestigious and creative professors, the leaders of the 'new' culture, continued to be the most socially radical though only a small minority of academics in any level may be considered radicals", Professor Lipset said.

Cynicism about campus life has increased since 1969, according to the survey, which have been published over the past year in *The Chronicle of Higher Education*. The proportion of academics agreeing that many of the highest-paid professors go where they are by being "opponents" rather than through their scholarly and scientific contributions rose from 48 per cent to 69 per cent. A comparable increase occurred in those agreeing that "many of the best students can no longer be distinguished by scholarship and scholarship".

In his new introduction Professor Lipset argues that while the overwhelming majority of students are working hard to succeed within the context of highly competitive academic and economic systems, "evidence from a variety of student

opinion surveys indicates they are not conservatives".

In 1974 a Harvard study showed only 24 per cent considered their politics were "centre" or "right of centre", compared to 58 per cent on the moderate left.

National surveys have shown that adherence to the norms of the 1960s counter-culture in America remains high among students, so far as attitudes towards sex, drugs and equality for women, homosexuals and blacks are concerned, he says.

"At the centre of the pressures for change, which reject much of the ethos of industrial society, has been a growing, highly educated oppositionist stratum or intelligentsia. These people increasingly take their lead from creative intellectuals, including scientists inside and outside the university."

"Although the hopes of the radicals of the 1960s that they would be able to launch a new American radical movement have seemingly failed, as they have in previous eras, the principle of 'victory in defeat' would still appear valid."

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Professor Lipset 'counter-culture'.

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## New York plans inflation-linked fees

The regents of the State University of New York, the country's largest university, have proposed increasing tuition fees at all four year campuses of the university system to equal one-third of the instructional costs—a fixed percentage that would cause fees to go up each year as overall costs rise.

At the same time the university has decided to terminate so many teachers' jobs that the American Association of University Teachers (AAUP) has appointed a special committee to investigate what it considers a fundamental challenge to the principle of academic freedom, tenure and due process.

The Regent's proposals have been strongly attacked by Dr Ernest Boyer, Chancellor of SUNY, who is at present on sabbatical in Cambridge. He said New York tuition fees are already higher than those of any other state with the exception of New Hampshire. Even with scholarships it cost a middle income family earning around \$15,000 about \$3,000 a year to send a child to live and study on a SUNY campus.

The Regent's plan is part of their regular revision every four years of New York's Masterplan for Higher Education, which includes the troubled City University and private institutions. The first draft was published for public comment in November, a revised draft was published last week. The version will be submitted to Governor Hugh Carey at the end of this month.

The regents want to tie tuition to costs because they believe this will protect the university against arbitrary rises in tuition fees imposed by New York's legislature. The regents say the rate can be raised whenever the budget does not balance, as happened earlier this year.

SUNY has strongly opposed much of the plan. Critics say that tuition fees are bound to rise with general inflation, fuel costs and teachers' salary increases. It could not be assumed that students and their parents could automatically absorb a fixed percentage of cost increases.

They also say that far from protecting the university, the new formula makes it easy for legislators simply to increase the percentage of costs that must come from tuition fees.

It is argued, too, that the proposals would set students, teachers and administrators against each other. More adequate appropriations for the university, as well as higher salaries for teachers and staff, could only come at the expense of the students. Conversely, low tuition fees could be maintained only at the expense of the teachers and the administration.

The regents' proposals also affect the City University of New York, but reaction here has been much more muted. The reason may be that CUNY, which is now charging

tuition fees for the first time in its history, does not think the proposal will raise its tuition rates.

In addition, CUNY has been given building priority over the 25-campus state system because it has only about half the space, student body and faculty of the institutions it serves. But the question remains whether any money for the buildings, and New York State's fiscal standing is extremely difficult to sell.

Meanwhile, within the state cut on over the level of funding, the budget cuts led the university to a 10 per cent reduction in staff. Natural science and SUNY for the past five or six years has been laid off in total. The university budget for the past five or six years has been cut by 10 per cent.

The university has agreed to calculate the curricula cost of those dismissed to other colleges and several have found jobs. But the AAUP's special committee is to investigate whether a fiduciary case of financial emergency has been made out by the university.

## Undergraduate courses under scrutiny

All undergraduate courses at Stanford University are to be reviewed and evaluated over the coming year. The aim is to reinvigorate those programmes which have lost their freshness and cut the most popular student choices to make room for more challenging and useful education and so what courses caused stress to ethnic minority groups and how they coped.

Stanford also wants to identify trends in educational patterns, and to see whether there are any imbalances between the pursuit of professional and broader, more liberal patterns.

Stanford is not the only university taking a hard look at its undergraduate side. Among other universities which have traditionally concentrated on research, Harvard and the University of Chicago have undertaken substantial reviews of their undergraduate programmes. And as the demand for PhDs falls, more and more institutions are emphasizing the need for excellence at the undergraduate level.

Many universities are now trying to cut back on confusing proliferation of undergraduate options, and are again looking favourably on the idea of compulsory core subjects.

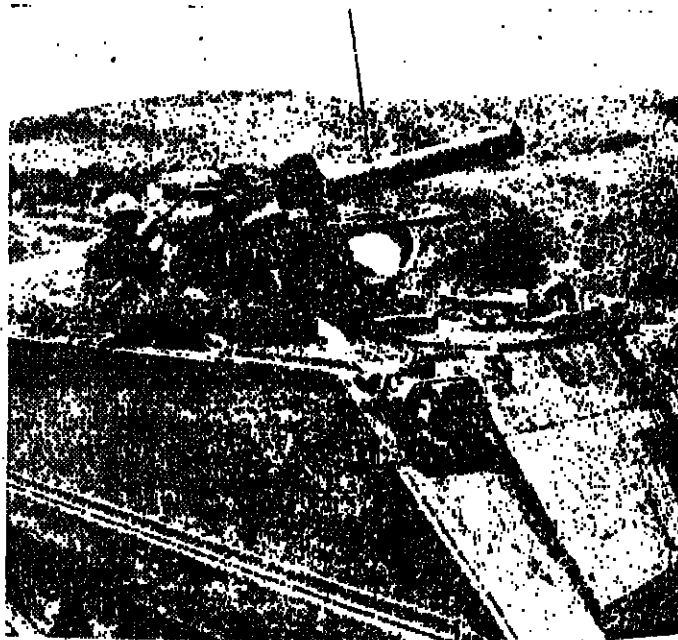
This "back-to-basics" movement has been spurred partly by academic discontent with the "woollier" subjects introduced when the cry was all for "relevance", and partly by general anxiety that students' weakness in English and mathematics often holds up their study of other subjects. Changes have also been demanded by students who are now flocking into vocational courses and those that lead directly to a job.

In its review Stanford says it will be looking not to jeopardize interdisciplinary activities, "but to ensure that the core of the curriculum does not fall into the discredited American custom of riding the pendulum between the liberal and the vocational."

President Richard Lyman said: "Graduate teaching remains central. It is important, as does the research effort of the institution."

In its final hours before recessing until the election is over, Congress last week passed a major revision of the GI Bill. For the first time this law allows education benefits to soldiers enlisted as volunteers at a time when the country is at peace.

The original GI Bill, passed in 1944, was one of the landmarks of American education. It sent thousands of men drafted during the Second World War to college on their demobilization, and was responsible for the first great postwar boom in higher education. The Bill has since been modified several times, altering terms of eligibility and the size of the benefits. The latest revision was in 1966.



GI's exercising in Europe: education benefits are to be extended to volunteers

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Scandinavia

## New government looks again at U68 reforms

from Mike Duckenfield

STOCKHOLM

Plans to restrict admissions to all university faculties, one of the keystones of the U68 reforms, are to be scrapped following Sweden's change of government.

Preventing the new three-party centre-right coalition government's 11-page policy programme for the next three years, the Prime Minister, Mr Thorbjörn Fälldin, also told parliament that other aspects of the reform package would be reconsidered.

However, while the division of responsibility between the central and local authorities is to be re-examined, the six regional boards set up by last year's Reform Act are to be established. Most of the original proposals are expected to come into force next July as planned.

At present, entry is restricted for a handful of faculties, mainly in the technologies and medicine. Under the 1975 legislation all admissions were to have been for particular courses with numbers geared to anticipated manpower needs. Applications would have been decided through a complicated selection procedure administered by a central board.

Other points in the government's programme include increasing resources for basic research in higher education, reforming the student study support system and promoting equality between the sexes.

The new Education Minister is Mr Jan-Erik Wikström, aged 44, one of five Liberals in the 20-strong Cabinet. He will be responsible for post-school education and cultural affairs. The new Assistant Education Minister is Mrs Birgit Mogård, aged 53, a Conservative. An Appeals university graduate

Republic of Ireland

## Union attacks 'federal set-up'

from John Horgan

The federal nature of the National University of Ireland is "a major source of irritation, delay and stagnation" in each of the colleges, according to a wide-ranging analysis and critique of university structures and procedures published by the Academic Staff Association of the University of Dublin.

The ASA document notes that this is particularly true in so far as it means all proposals for academic innovation have to be referred outside the originating college in practice to the NUI senate. For a decision, the ASA says, the Irish Federation of University Teachers, which earlier this year

secured a negotiating licence from the Department of Labour and is now a fully fledged trade union, although not as yet affiliated to the Irish Congress of Trade Unions.

Several long-awaited reforms are itemized in the document. One is the need to devise a general college policy which would allow for the rotation of headships of departments. Another is the extension of faculty membership to all full-time staff members and to certain categories of part-time staff. There is also a call for the representation of non-academic staff on both the Academic Council—at present dominated by professors—and the governing body, the chief policy-making area in each college.

France

## Technology institutes face rough passage

from Guy Neave

PARIS  
Failure to attract enough students, together with a policy of academic "drift" is threatening the future of the Institut Universitaire de Technologie, according to a report by the *Cour des Comptes*, the National Auditing Agency. The report also points out that the resources and plant were not used. Now, in an effort to halt the slide, the Institut is being restructured. Madame Alice Samin, Secretary of State for Higher Education, has held out the possibility of further resources for the Institut, more teaching personnel with industrial experience, well below the figure set when the IUTs were created in 1966, currently has this background.

The problems, however, are more complex than just money and the reluctance of the institutes to employ people from industry. In spite of considerable investment, there are 66 IUTs in 56 different towns in France, the whole strategy, by which the IUTs provide a highly special-



Mr. Jan-Erik Wikström

An Appeals university graduate

Italy

## Rome tests ground on entry cuts

from Patricia Clough

ROME  
Apparently encouraged by the welcome given to his plan to impose a *numerus clausus* in Italy's medical schools, Signor Franco Maria Malfatti, Education Minister, has now floated the possibility of doing the same in arts and education faculties.

His proposal was based on the expectation that most of the arts and education graduates will continue to take up teaching as a career. The number of students would be adjusted to the number of teachers which the country would need in the foreseeable future.

But, he admitted in an interview with the weekly illustrated magazine, *L'Espresso*, the problem was more complex than that of the medical schools. He did not elaborate and ministry officials were unable to say what he proposed to do about the smaller proportion of students who go on to careers in a wide variety of other fields.

The fact that an Italian education minister can suggest limiting intake without risking his political career shows how far the country has gone since the time when university admission for all was regarded as the height of democratic achievement.

Since then, the virtual collapse of the universities under the sheer weight of numbers and the massive unemployment among graduates have forced even the left-wing to change their views on the subject.

## Unemployed fail to agree

ROME

The first national congress of Italy's Unemployed Graduates' Association in Naples has rejected government plans to create a type of paid apprenticeship for young people without jobs.

The government proposal to give young people training on half time and half pay would simply create a source of cheap labour for industry and businesses, it argued.

The rejection of the government's proposal, which is still in any case only in the planning stage, was one of the few subjects on which the congress was able to agree.

The association was formed in Naples recently to champion the cause of the growing army of graduates and college diploma-holders who are unable to find work. It was set up in the AUB (THESE, October 8). Delegates estimated their number to be around 3.5m in Italy as a whole, with 1m in the region around Naples alone.

Talks on the future activities of the association are continuing with the unions and Communist Party.

They also have a rival in the form of higher technical courses in certain *lycees* and in the private sector. The original plan, outlined as far back as 1957, was to close down the secondary schools and to absorb them into the IUTs. This has not happened.

On the contrary, the number of pupils in the secondary sector has expanded.

In the area of staffing structure, there is a clear tendency towards recruiting personnel with a university background, although one of the basic purposes in creating the IUTs was to allow a closer exchange between education and industry by employing staff with industrial experience.

Madame Sauter-Seké has gone part way to returning the IUTs to their original purpose. The government will make any further initiatives to prevent the rundown of what many observers regard as potentially valuable institutions in French higher education for the past hundred years.

West Germany

## Urgent aid programme for young researchers

by Günther Kloss

The presidents of the leading West German organizations and institutions concerned with research, including the German Research Association, the Max Planck Society, the Science and Humanities Council and the Rectors' Conference, have proposed an emergency programme to assist young research workers.

The specific long-term purpose of this programme, which is to be named after atomic physicist and Nobel Prize winner Professor Werner Heisenberg, is to preserve the high standard of German *Wissenschaft*, which the presidents fear will inevitably suffer unless fresh ideas are constantly fed into it and developed.

Many young men and women at the post-doctoral level will in the next few years be unable to find employment at universities and research institutes because virtually no new posts have been created during the past two years.

Further, as the number of university posts nearly quadrupled during the expansion period from 1960 to 1974, a fundamental shift in the age structure of academic staff has occurred. The average age of all staff with tenure is at present below 45 (THESE, February 20). Appointment and promotion prospects are thus very much reduced.

The programme aims to support and encourage young qualified research workers at various levels of their careers. Its sole concern is with academic standards, not with the promotion of particular subjects or research areas, so that science, technology, social sciences and arts are all included.

Detailed criteria for selection still have to be worked out and the question of job security for these Heisenberg professors needs further clarification.

The whole programme is in addition to existing staff expansion plans for institutions of higher education which are geared to a capacity of 850,000 students in 1985. Even though the total cost will be in the order of DM700m over the 10-year period the authors emphasize that this is a small amount compared to existing staff costs. Both Bonn and the Länder would have to contribute under the Federal-Länder agreement for general research support.

## Cross-fire entente

from John Munro

BEIRUT  
Situating in West Beirut, stronghold of the Palestinian-Moslem-Liberal alliance, the beleaguered American University of Beirut is still managing to survive Lebanon's 18-month civil war, thanks largely to an understanding between the Palestinian leadership and the university administration, which provides high quality medical care in the AUB Hospital in return for protection from squatters, looters and ill-disciplined terrorists who might be disposed to enter the university's 80-acre campus.

Now, fortified with the promise of a \$500,000 grant from US AID and with the encouragement of several Lebanese politicians still hopeful of a lasting political settlement, the AUB has issued a circular to its teaching staff in an effort to find out just who is prepared to gamble his professional future and possibly his life for the benefit of an educational institution which has been teetering on the edge of ineffectiveness for the past three years.

The signs are that about half the arts and sciences faculty are ready to give the university at least one more year, but in the professional divisions—medicine, agriculture, engineering and architecture—the number is likely to be much less. School re-opening is easier to get work elsewhere.

Although traditionally serving both Christians and Moslems, the AUB must now expect to draw its students almost exclusively from the Moslem and Palestinian communities, whose control of the campus is clearly indicated by the numerous posters supporting their cause which are plastered everywhere. The Palestinian Yasser Arafat and his *Likhat* leader, Kamel Jumblat, a Lebanese, are depicted huddling in amiable colloquy; anti-Israeli propaganda enforces the UN resolution equating Zionism with racism.

Sadder of all, however, are the posters publicizing the so-called "March 16" many of them AUB students, whose soft young faces stare out uncomprehendingly as if bewildered by the fate that has befallen them, a reality which the UN resolution and fulfilment of the past 18 months.

South Africa

## No Whites allowed

An uncompromising "no" to "freedom suggestions" that Whites students at postgraduate level and possibly even undergraduates are to be admitted to universities now reserved for Africans and other non-Whites has been given by Mr. C. J. R. R. Minister of Education and Science, Mr. Bantu Education, for the past hundred years.

## Construction of the \$74.5m (about £9m) new engineering and science buildings of the University of Hong Kong is to begin next summer.

Three new buildings occupying a total area of 260,000 sq ft will be erected by June 1979 to replace the existing engineering and science buildings which are over sixty years old.

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**Heriot-Watt**  
Members of general convocation: J. Dunning, J. G. Ferguson, J. Grant-Wood, H. D. Mackenzie, F. K. N. Aitken and G. M. McL. Dewar; Dr J. Rorke; A. D. Reid; D. C. King.

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Dr P. F. Phillips Higgins, reader in the department of Law at UWEIST, has been granted a personal chair.

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OU programmes

October 24 to 29

Sunday October 24

8.30-9.30 Open Forum—5: Student Representative.

Thursday October 28

8.30-9.30 Open Forum—3: How a Course is

Friday October 29

10.30-11.30 Open Forum: Preparing for A-Level.

11.30-12.30 Open Forum: Special Student Support.

12.30-1.30 Open Forum: Special Student Support.

1.30-2.30 Open Forum: Special Student Support.

2.30-3.30 Open Forum: Special Student Support.

3.30-4.30 Open Forum: Special Student Support.

4.30-5.30 Open Forum: Special Student Support.

5.30-6.30 Open Forum: Special Student Support.

6.30-7.30 Open Forum: Special Student Support.

7.30-8.30 Open Forum: Special Student Support.

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lecturer in crystallography and fellow of Trinity College, Cambridge, has been appointed to the chair of biophysics at Imperial College, London.

Professor George Wallace Kenner

at present Health Harrison professor of organic chemistry at Liverpool University, has been appointed the first Royal Society Research Professor at the University from January 1.

Dr Richard Gombert

lecturer in Sanskrit and Pali and a fellow of Wolfson College, Oxford, has been promoted to the Boden chair in Sanskrit.

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## BOOKS

## Plant-water relations

Water and Plants  
by H. Melander and D. W. Sheriff  
Blackie £5.30 and £2.65  
ISBN 0 216 90081 6 and 90080 8

One of a tertiary biology series, this book is designed specifically for course options at advanced undergraduate level as well as being of value to specialists in related fields. Since the publication of R. O. Slatyer's excellent but rather advanced *Plant-Water Relations* (1967) there has been a need for a similar but simplified treatment of the subject. The up-to-date approach adopted in *Water and Plants* provides this, covering many of the essentials concisely and clearly.

The authors consider the topic "from the outside", with emphasis on the "remarkable properties of water". The first chapter deals with these properties, showing their biological importance and clearly expounding the fundamental concept of water potential. Throughout, a quantitative analysis is developed in thermodynamic terms although an extensive knowledge of mathematics is not assumed.

Two major chapters deal with transpiration and water movement through the plant. Here, as elsewhere, recent findings have been well integrated with earlier work, and modern bio-energetic terminology and SI units used. Rather little-known but biologically important quantitative statements often illustrate the narrative, e.g. the total area within the leaf from which evaporation occurs is seven to thirty times the leaf area, 7-3 per cent of the conducting vessels (the largest) carry some 50 per cent of the water flow, and leaf area may change by 10 per cent from maximum to minimum water content.

One such statement implies that cuticular transpiration is rarely more than 3 per cent of total transpiration. While it is conceded that there is no question of the ecological classification of plants which has been developed on the basis of supposed contrasting rates of cuticular transpiration.

The chapter on water in soils does little more than define common terms and indicate methods for determining soil water status. Most modern courses on soil would need more detail.

The good introduction to tissue water relations towards the end of the book includes a wide range of procedures for determination of water and osmotic potentials.

The concluding chapter on the role of water in plants summarizes the functions which water fulfills and interestingly notes differences in water-use efficiency in plants showing C<sub>3</sub> and C<sub>4</sub> photosynthesis and Crassulacean acid metabolism.

A narrow view is taken of xerophytes, stated here to be able to survive severe tissue desiccation. The term "xerophyte" has been frequently interpreted as referring to desert plants, but in fact it is a valuable concept in the study of simple organisms to the more complex features of water relations. For example, essential details are given to the importance of evaporative cooling, and the importance of the diffusion of water vapour in the atmosphere. For example, essential details are given to the importance of evaporative cooling, and the importance of the diffusion of water vapour in the atmosphere.

Ecological aspects of plant-water relations receive only scanty treatment. As water is a major limiting factor in the productivity of ecosystems in many parts of the world, and the ecological significance of water seems desirable, the authors of this book have provided a chapter on the subject which is a very good introduction to the general subject of plant-water relations.

John F. Thain

## Mutagenic effects

Mutation Research  
by C. Auerbach  
Chapman & Hall, £10.50  
ISBN 0 470 03670 2

The findings in recent years that many drugs, pesticides and other industrial chemicals are capable of inducing mutations in living organisms, but also of causing mutations (heritable changes) has stimulated enormous interest in the field of environmental mutagenesis. Mutations are nearly always unfavourable and untreatable, and the accumulation of mutations in the germ cells is likely to have lasting consequences for the whole human species. Furthermore most people now accept that many cancers arise as a result of mutations in the body cells. A close association between the production of mutations (mutagenesis) and of cancer (carcinogenesis) has recently been revealed, since it has been shown that most carcinogens are also mutagens.

Whereas the toxic effects of hazardous chemicals, such as the dioxin recently released into the atmosphere following an explosion at a factory in Seveso, are easily measured, mutagenic effects are much more difficult to assess. Clearly the development of screening procedures for detecting environmental mutagens and carcinogens is a task of the utmost importance, but this can only be successfully undertaken with an understanding of the mechanism of mutagenesis.

The comprehensive way in which *Mutation Research* discusses the effects of all types of mutagens on a wide variety of organisms ranging from bacteriophage through bacteria and fungi to plants, insects and mammals makes it an extremely valuable book. The descriptions of classical experiments and the historical development of mutation research make fascinating reading. The book will not be as far from non-geneticists, but this is hardly to be expected considering the complexity of the subject and the variety of disciplines covered.

Several chapters deal with the effects of X-rays. The classical work of Muller on *Drosophila* is described, followed by the development of the tanger theory and discussion of the possible mechanisms for the production of different types of

chromosomal abnormalities. Chapters on repair of X-ray damage deal with the subtle but important studies of chromosome breakage and indirect genetic studies of systems. Surprisingly, only one page on X-ray damage to animals of repair of X-ray damage.

Several excellent chapters deal with the chemical mutagens, modes of action of different agents, covering the DNA, the differences between substitution and frameshift mutations and the actions of alkylating agents and several other various miscellaneous phenomena such as mutagen specificity, reversibility, and there is a final chapter on the application of mutation research.

The book is full of reliable data, and is a pleasure to read. It is a pity that the book is so expensive, and that it is so difficult to obtain. It is a pity that the book is so expensive, and that it is so difficult to obtain.

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John F. Thain

## Not so normal after all?

Philip Ziegler  
Blackie £6.50  
ISBN 0 00 216310 4

The would-be biographer of Lord Melbourne faces two problems: the difficulty of obtaining access to the sources, and the subtle quindary of writing in the shadow of Lord David Cecil (*The Young Melbourne*, 1939) and Lord M. (1954).

A year ago, Dorothy Marshall, solved the second problem with a clear and unadorned narrative. Now Philip Ziegler has solved the first, and been allowed to consult papers previously withheld even from Lord David Cecil.

The new sources comprise a fragment of autobiography, a large collection of letters to Lady Branden, and documents setting out the full extent of the Queen's dealings with her premier after his retirement.

The most significant of these new papers are the letters to Lady Branden. Philip Ziegler shows conclusively that the famous law-suit brought by Lord Branden in 1828 and collapsed because Melbourne bought him off, and that Melbourne's liaison with Lady Branden was renewed and continued up to, and indeed after, the time he met Caroline Norton in 1831. It is no longer possible to say, as Lord David did, that the dismissal of Lord Branden's case "the shadowy figure of a weak and unadorned narrative. Now Philip Ziegler has solved the first, and been allowed to consult papers previously withheld even from Lord David Cecil."

His figure is no longer shadowy, and it does not vanish. Melbourne's letters to Lady Branden also contain the first substantial indication of the excitement which he derived from hearing young women and girls talking to him, to collect images of, and, since he used to call his ward Susan and throw her down in a corner of the room at Brockton, to carry out.

What Philip Ziegler might have done, one supposes, was to link the satisfaction Melbourne felt in harsh laws and savage sentences with his hitherto undisclosed viciousness and both with the frustration he felt at having failed to thrash either Byron or Lady Caroline Lamb.

John Prest

## Spaniards at Dover

The Exchange of Christendom:  
The International Entrepot at  
Dover, 1622-1641  
by J. B. Kepler  
Leicester University Press, £7.50  
ISBN 0 7185 1144 1

A lad who stood to arms on the coast in 1588 to repel the threat of the Armada would never have supposed he would live to see parties of Spanish soldiers free and unmolested on English soil. Yet in 1639 Spanish troops who were being taken in English transports to fight in Flanders were landed at Portsmouth and marched to Dover to avoid capture by Dutch warships in the Channel. This bizarre episode of the Thirty Years' War is the subject of a book by J. B. Kepler, the use of Dover to maintain a connection between Spain and the Netherlands seat of war.

It was chiefly a military matter. Spain had to send men, stores and money to fight the Dutch in Flanders, and Dutch sea power threatened the natural route of the Rhine valley route; avoiding hostile Spanish territory (as explained in Geoffrey Parker's *The Army of Flanders and the Spanish Road*), but bullion, and in case of urgency Channel in English or other neutral ships to Dover to be shipped across to Dunkirk from there. The Anglo-Spanish agreement of 1632, under which Spanish shipments of money to Flanders went to Dover in vast quantities, in English vessels.

That was an affair of Government.

Ralph Davis

## Among this week's reviewers

Philip Abrams is professor of sociology at the University of Durham. Derek Blackmore is author of *Operant Conditioning: An Experimental Analysis of Behaviour*, published by Psychology at University College.

F. G. T. Hollis

## BOOKS

## High command strategists

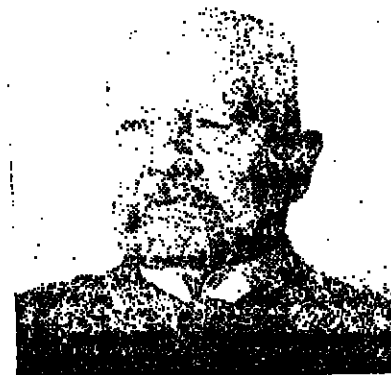
The Silent Dictatorship: The Politics of the German High Command under Hindenburg and Ludendorff, 1916-1918  
by Martin Kitchen  
Croom Helm, £8.50  
ISBN 0 85664 301 7

From the end of August 1916 until October 26, 1918, the most powerful men in Germany were the leaders of the army's high command, Hindenburg and Ludendorff. The exact nature of their authority has been the subject of historical controversy. Ludendorff, the junior but more forceful of the two, has sometimes been credited with wielding dictatorial power. On the other hand, Gerald Feldman, in his admirable book *Army, Industry and Labour in Germany* (Princeton, 1966), was more impressed by Ludendorff's "weakness, vacillation and almost complete incapacity to control Germany's internal affairs".

The constitutional structure of the Wilhelmine Empire certainly made it difficult to exercise effective dictatorial authority. Furthermore, Hindenburg and Ludendorff had to tackle economic and social problems for which their training left them quite unfitted. Hence they reacted to shortages of war materials with crash armaments programme which created more problems than it solved. They were politically very conservative; yet the social pressures created by their war policies strengthened the position of trade unions and radicalized the urban working class. They were able to engineer the downfall of Chancellor Bethmann Hollweg in July 1917, but their "own" Chancellor, Michaelis, was forced to resign a few months later. Despite their contempt for civilian politicians they could not

dispense with them, and they never dared to present the German people with an undisguised military dictatorship. Yet when all these reservations have been made, the case for regarding the high command as the real power in Germany at this time remains overwhelming. In his well researched account Dr Kitchen describes the regime of Hindenburg and Ludendorff as being "halfway between the Bonapartism of Bismarck and the Fascist dictatorship of Hitler". In the political arena Ludendorff's track record was impressive enough. He was able to secure the dismissal of the Reich Chancellor, the Foreign Secretary, the Prussian war minister, the chief of the naval staff and the chief of the Kaiser's civil cabinet. Even the Crown Prince was moved to exile. "You cannot demand of my father that he dismiss a statesman every five minutes just because you don't like him."

On the economic front the situation was more complex. In December, 1916, an Auxiliary Service Law was enacted at the behest of the



Portrait of Paul von Hindenburg in 1934, when he was President of the Reichstag.

Kitchen rightly points out that too much should not be made of conflict between military and civilian authorities at this time. The "silent dictatorship" of Hindenburg and Ludendorff owed its power to the support of Germany's ruling classes, for whom the high command was the guarantor of their security. At the same time civilian ministers and Reichstag politicians were very useful to the high command even when they seemed to be obstructing it, because they could then be held responsible when things went wrong. The last example of this "lightning conductor" technique came when Ludendorff finally faced defeat at the hands of the entente. He promptly placed the blame on making an unpopular peace on the shoulders of hitherto important parliamentary politicians. It was a stratagem which worked all too well.

A. J. Nicholls

## From ARROW

the newest, most up-to-date paperback reference books

Written by leading authorities each Arrow dictionary combines the functions of a dictionary, an encyclopedia and a reference work. It is a complete cross-referencing system of diagrams and tables, and is a complete guide to the subject.

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**BASIC ECONOMICS:** a dictionary of terms, concepts and ideas  
Tim Congdon & Douglas McWilliams

**ANTHONY HYMAN:** a dictionary of terms, concepts and ideas  
Anthony Hyman



# LETTERS TO THE EDITOR

## The future of Russian studies

from Dr James Muckle  
Sir—In a letter (THES, October 1) the rector of Morrison's Academy Boys' School makes assertions about Russian in schools which I am sure many teachers would like to challenge. Russian is not "undeniably much more difficult" than Spanish or Italian; this is a matter of opinion and of the enthusiasm of the pupils. Exactly the same could be said to apply to the "opportunities of using the language for business or pleasure".

The rector writes that his "experience over many years has been that boys starting Russian become quickly disillusioned". My experience over 14 years in schools and two in a university is the exact opposite.

Though numbers are small, the fact that a relatively high proportion of pupils who start Russian at school continue with it at universities indicates that the Rector's experience is untypical. Moreover, I interview many keen young people who would like to work as teachers of Russian if only heads and principals would let them. They are disillusioned not with the subject, but with those who frame the curriculum policy of our schools.

Immature boys may be influenced by the naive idea that they can "chat up the birds" more easily in Russian than in English. I am sure, though, that the schoolmaster to encourage pupils to think more seriously than this. Happily, a great many have the imagination to see beyond such trivial considerations. Finally, it is not so difficult as Mr. Johnston-Jones suggests to obtain the help of a native speaker of Russian. I cannot say I know of one off-hand in Crief, but the larger British colonies are not without Russian speakers, and some of the native speakers have more ideas about teaching than the average 22-year-old exchange student from southern Europe.

Yours faithfully,  
JAMES MUCKLE,  
School of Education,  
Nottingham University.

undoubtedly a more difficult second language than Spanish or Italian, though not so difficult as is often imagined (and probably easier than the classical Greek which used to be so widespread in grammar schools).

It is obviously important for the health of a school that subjects should not be introduced if they lead to disappointment and disillusionment. But it is my experience and that of many colleagues in universities throughout the country that in the past decade the schools have produced many hundreds of able students who have pursued their courses in Russian with enthusiasm and have graduated with very creditable degrees.

It is the next generation of such students that I am concerned about, not about those whose aspirations extend no further than "chatting up the birds in Red Square". The worrying thing is that we may be in danger of producing a generation who have no means of making immediate contact with a culture which is close at hand and, whether we like it or not, in direct competition with our own. If this should happen, we shall, moreover, have failed to give adequate educational opportunities to the most linguistically able and culturally aware members of this generation.

It is surely a serious indictment of state schooling if only public schools (which have no monopoly on able pupils) are prepared to teach Russian and similar "difficult" subjects.

I hope that Mr. Johnston-Jones and other headmasters will steadfastly refuse to be put off by the difficulties which undoubtedly exist and that the present problems will prove to have been short-term.

Yours faithfully,  
MALCOLM JONES,  
Department of Slavonic Studies,  
Nottingham University.



Moscow: do we prefer to be ignorant of Russia?

Soviet Union. A much more difficult task would be to find people with informed opinions. As far back as 1957 a lecturer in Russian at Manchester University (V. J. Sedgwick) stated in a public lecture that it is impossible to understand Russia without a knowledge of Russian. Does this still not hold good in 1976?

For some years now Russian has been disappearing from school timetables—not for valid educational reasons, and not for lack of well-qualified and enthusiastic teachers, but for administrative and economic considerations. This has had an enormous effect on the teaching of Russian in higher education.

The Department of Education and Science has told the Association of Teachers of Russian on

many occasions that the law places responsibility for the secular curriculum in schools on local education authorities and school governors, while decisions as to what should be included are normally taken by the head teachers and teaching staffs of our schools. I would therefore urge all these groups to give their active support to the revitalization of Russian in schools, so that a policy could be adopted which would ensure it a place in the curriculum throughout the country. As a consequence, Russian in higher education would benefit, too—and so would the nation.

Yours sincerely,  
PETER ROONKY,  
Honorary Secretary,  
The Association of Teachers of Russian,  
Wolverhampton Polytechnic.

## Library system

from Mr R. Moss  
Sir—For various good reasons I am only belatedly writing to you on the article published by Dr D. J. Urquhart (THES, September 17).

It needs to be said that there was not a "system" of libraries—there was certainly no effective official network of interlocking libraries before the war which Dr Urquhart describes. Much of this, particularly the subsequent concentration of libraries, was the result of the interlocking of the library systems of the various universities and polytechnics, not as the result of a considered policy of library management which would control them with a view to saving money on the one hand and ensuring that the best was available on the other.

While one agrees with Urquhart that there has been a change of approach in the libraries and that there has been a limitation of library stock, one can only deplore the way in which the university libraries have been reduced to a mere collection of books and a few warehouses containing old and obsolete material. Such changes should not be made to academic libraries. And one can only deplore the way in which the university libraries have been reduced to a mere collection of books and a few warehouses containing old and obsolete material.

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## Universities

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FACULTY OF LAW  
LECTURERS IN LAW

Applications are invited for the following posts:

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In the Departments of Private Law and Public International Law. The Department of Private Law is responsible for courses in Scots Private and Mercantile Law at Ordinary, Advanced and Honours standard for the degrees of LL.B. and B.Acc. The Department of Public International Law is responsible for courses in Public International Law and international institutions at Ordinary and Advanced standard and also offers courses on special subjects for students taking Honours in other departments. It is hoped to introduce Honours courses in the Department, in conjunction with the Department of European Law. The higher degrees of LL.M. and Ph.D. are offered in the Faculty, giving opportunities for teaching and supervision of research students.

It is expected that at least one of the full-time posts will be in Private Law. Applicants with a special interest or qualification in Maritime Law or who could contribute in the fields both of Private Law and Public International Law would be particularly welcome.

The initial salary for the full-time Lectureship will be within the Lecturers' scale of £3,174-£6,446 per annum. Placement will be dependent upon qualifications and experience. An appropriate superannuation scheme will apply. The successful candidate will be appointed to a part-time Lectureship with a part-time salary of £1,000 per annum.

Further particulars may be had from the Secretary of the University Council (Room 18), The University of Glasgow, Glasgow, G12 8QQ, with whom applications (eight copies), giving the names and addresses of three referees, should be lodged on or before 15th November, 1976.

In reply, please quote Ref. No. 3873.

## AUSTRALIA

### MONASH UNIVERSITY

#### DEPARTMENT OF ECONOMICS

##### LECTURERSHIP

Appointment for three years with possibility of extension. The successful candidate will be responsible for the teaching of the following courses: Microeconomics, Macroeconomics, and International Trade. The successful candidate will also be responsible for the supervision of research students. The salary will be within the Lecturers' scale of £3,174-£6,446 per annum. The successful candidate will be appointed to a part-time Lectureship with a part-time salary of £1,000 per annum.

## AUSTRALIA

### UNIVERSITY OF MELBOURNE

#### DEPARTMENT OF BIOCHEMISTRY

##### LECTURERSHIP

Appointment for three years with possibility of extension. The successful candidate will be responsible for the teaching of the following courses: Biochemistry, and Molecular Biology. The successful candidate will also be responsible for the supervision of research students. The salary will be within the Lecturers' scale of £3,174-£6,446 per annum. The successful candidate will be appointed to a part-time Lectureship with a part-time salary of £1,000 per annum.

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Currently there are 2,300 full and part-time students enrolled in faculties of Arts, Science, Education, School of Music and a number of special projects for native students.

Applicants must be Canadian citizens or British subjects resident in the province of Manitoba.

Term of office will commence 1st July, 1977.

Written applications or nominations will be received until 31st December 1976 by: W. C. Burgess, Chairman, Board of Governors, Room 119, Clark Hall, Brandon University, Brandon, Manitoba R7A 6A9 CANADA.

## University of Wales

### DEPARTMENT OF TOWN PLANNING

#### PROFESSOR

In succession to Professor A. Goss

Salary: £7,897 or above (1975)

Requests (quoting ref. THES) for details and application form to Personnel Section (Academic), UWIST, Cardiff CF1 3NU

Closing date: Nov 18, 1976

## University of Wales

### DEPARTMENT OF APPLIED ECONOMICS

#### LECTURER

(Micro-Economics)

Salary: £3,174 to £6,446 (1975)

Requests (quoting Ref. THES) for details and application form to Personnel Section (Academic), UWIST, Cardiff CF1 3NU

Closing Date: 12 Nov., 1976

## LECTURER IN BIOCHEMISTRY

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West Theatre

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Dublin 2

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## AUSTRALIA

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##### LECTURERSHIP

A vacancy exists for a Lecturer in the Department of Modern Languages. The successful candidate will be responsible for the teaching of the following courses: French, Italian, and Spanish. The successful candidate will also be responsible for the supervision of research students. The salary will be within the Lecturers' scale of £3,174-£6,446 per annum. The successful candidate will be appointed to a part-time Lectureship with a part-time salary of £1,000 per annum.

Further information, including details of application procedure, may be obtained from the Secretary, Griffith University, St. Lawrence, Queensland 4068.

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ATOL 15286

## Ideology and reviews

from Dr H. M. Drucker

Sir—Professor Seliger has responded (THES, August 27) some-what tardily to my review (April 9) of his recent book on Ideology although he does not explain his hesitation. His letter ignores all of the issues raised in my review while he attributes to me things I did not say. He even descends to "political" bias.

The main themes of my review were that his book is so badly written as to be almost incomprehensible; that his "definition" of Ideology is so inclusive as to be of little use; that, indeed, any inclusive definition of Ideology is bound to be vague unless it is rooted, as Seliger's is not, in a philosophical account of the relationship between theory and practice, and between ideology and the real world.

But my most serious doubt about the book arises from the fact that his theses are not so much argued as asserted, and then, amazingly, recommended to students.

However, it is not entirely surprising that Professor Seliger is reduced to accusing me of prejudice. In the introduction to his book he states that he is indifferent to facts, his own understanding of how to

cal argumentation proceeds on different levels and that politics is little separable from ideology as the latter can be opposed without reservation to factual knowledge or committed by or opposed to tangible class conditions." In the circumstances I thought my review was quite mild.

Yours sincerely,  
H. M. DRUCKER,  
Department of Politics,  
Edinburgh University.

## Thomas Hardy

from Caroline Robhouse

Sir—In his review of *The Complete Poems of Thomas Hardy* (THES, September 24) John Holloway asks whether Macmillan plans to include *The Dynasts* in its New Wessex Edition. Indeed, we do, and the volume will appear as the last in the New Wessex in summer 1977.

Under the editorship of Professor Harold Osgood, the short stories, which appear in March 1977 in three volumes, of which the third will contain the previously uncollected stories and fragments together with *The Famous Tragedy of The Queen of Cornwall*.

Yours faithfully,  
CAROLINE ROBHOUSE,  
Macmillan London Ltd,  
4 Little Essex Street,  
London.

## Engineering entry

from Mr Harry Webster

Sir—Peter Hills (THES, October 8) suggests that the demand for preventive maintenance and physics from entering engineering and science should be thought out. I agree, but there is more to it than entry qualifications.

As I have argued recently in these

columns, what is missing in higher education in this country is the widespread opportunity for students to delay their career commitment to specific professions for one, two or three years after entering college according to the needs of different professions. If-plus students do not have the knowledge or experience of higher education or of their chosen professions to make a rational choice.

Would we not get more able, self-aware and engaged sixth-formers to study engineering in their spare time, if they were offered a foundation year necessary to the first year of a three-year degree in engineering?

The foundation year could be designed to allow transfer to a variety of courses leading to a commitment to other professions, as, for instance, town planning, journalism or three-dimensional design, areas where this approach not only feasible but desirable.

A four-year degree in engineering would make it possible to study mathematics and physics for these students would, by definition, include many of those who only follow a well-trodden path to who follow wish to keep their options open until they had a sound basis for a final commitment.

Perhaps it goes without saying that, for some of these alternative pathways, a DIFE alternative would be an additional bonus which would allow access to a wider range of courses in a number of institutions.

Yours sincerely,  
HARRY WEBSTER,  
Dean of Education,  
Sunderland Polytechnic.

مكتبة الأصل







## Polytechnics continued



## SCHOOL OF SOCIAL STUDIES SENIOR LECTURER

Senior Lecturer in Public Administration to contribute to established courses and act as Course Leader for Social and Public Administration option of proposed degree in Social Studies.

Applicants should have Honours or higher degree in Public Administration, or related disciplines, and practical experience. Salary in range £8,312 to £9,028 per annum. Assistance with removal expenses.

Details from Chief Administrative Officer,  
**Robert Gordon's Institute of Technology**  
Schoolhill, Aberdeen AB9 1FR

## TEESSIDE POLYTECHNIC

Department of Civil and Structural Engineering and Building  
Applications are invited for the following posts:

**PRINCIPAL LECTURER IN CIVIL ENGINEERING (Geotechnics)**  
to lead the Geotechnics and Civil Engineering Materials section of the department.

**LECTURER II/SENIOR LECTURER IN CIVIL ENGINEERING (Hydraulics/Hydrology)**

Salary scales:  
Principal Lecturer: £8,840 by £234 to £9,642, plus £312 supplement.  
Lecturer II/Senior Lecturer: £3,279 by £219 to £5,031 (efficiency bar) by £231 to £5,955 by £231 to £6,417, plus £312 supplement.  
Appointment will be made at Lecturer II level.  
Application forms, returnable in two weeks, are available from the Staffing Section, Teesside Polytechnic, Borough Road, Middlesbrough, Cleveland County Y81 3BA.

**SUNDERLAND  
POLYTECHNIC**  
FACULTY OF ENGINEERING  
DEPARTMENT OF MECHANICAL ENGINEERING  
**LECTURER II IN THERMODYNAMICS AND MECHANICS OF FLUIDS**  
This appointment is for a permanent position in the Faculty of Engineering, Department of Mechanical Engineering. The successful candidate will be responsible for the teaching and supervision of students in the areas of Thermodynamics and Mechanics of Fluids. The candidate should have a degree in Mechanical Engineering or equivalent, and a minimum of five years' experience in the field of Thermodynamics and Mechanics of Fluids. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Sunderland Polytechnic, Borough Road, Middlesbrough, Cleveland County Y81 3BA.

**LOTHIAN REGIONAL COUNCIL**  
NAPIER COLLEGE OF DISTANCE EDUCATION  
LECTURER IN CIVIL ENGINEERING (Hydraulics/Hydrology)  
This appointment is for a permanent position in the Napier College of Distance Education. The successful candidate will be responsible for the teaching and supervision of students in the areas of Hydraulics and Hydrology. The candidate should have a degree in Civil Engineering or equivalent, and a minimum of five years' experience in the field of Hydraulics and Hydrology. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Napier College of Distance Education, 100 Colinton Road, Edinburgh EH10 5DT.

## LONDON

**THAMES POLYTECHNIC**  
SCHOOL OF BUSINESS ADMINISTRATION  
LECTURER II IN LAW  
From January 1, 1977 or earlier

Applications are invited from qualified persons for the post of Lecturer II in Law. The successful candidate will be responsible for the teaching and supervision of students in the areas of Law. The candidate should have a degree in Law or equivalent, and a minimum of five years' experience in the field of Law. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Thames Polytechnic, 100 Colinton Road, London EC1A 3BB.

## Holidays and Accommodation

**HOTEL REINA ISABEL**  
Las Palmas, Gran Canaria  
7 nights this winter from £100 per person, Thames A & L, 100 Colinton Road, London EC1A 3BB.  
See your travel agent or ring us on 01-387 4431/6011.  
Prices subject to availability and adjustment. ATOL 1842C.

**HOTEL SAN FELIPE**  
Puerto de la Cruz, Tenerife  
23 nights this winter from £100 per person, Thames A & L, 100 Colinton Road, London EC1A 3BB.  
See your travel agent or ring us on 01-387 4431/6011.  
Prices subject to availability and adjustment. ATOL 1842C.

## Colleges of Higher Education

## CHESTER COLLEGE OF HIGHER EDUCATION Deputy Principal

Applications are invited from suitably qualified men and women for the post of DEPUTY PRINCIPAL to take up duty in May, 1977.

Candidates should have a good honours degree or equivalent professional qualifications, together with relevant experience. The salary, which is within Group 8, is in accordance with the Burnham Further Education Salaries Report and is currently £8,652 per annum.

Further particulars may be obtained from the Clerk to the Governing Body, Chester College, Cheyney Road, Chester CH1 4BJ, to whom applications should be forwarded by October 31, 1976.

**LANCASHIRE  
EDITH HILL COLLEGE OF DISTANCE EDUCATION**  
Applications are invited from suitably qualified persons for the post of Lecturer II in Law. The successful candidate will be responsible for the teaching and supervision of students in the areas of Law. The candidate should have a degree in Law or equivalent, and a minimum of five years' experience in the field of Law. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Edith Hill College of Distance Education, 100 Colinton Road, London EC1A 3BB.

**WARWICKSHIRE  
ARLINGTON HILL COLLEGE**  
The Management College for the Warwickshire County Council. Applications are invited from suitably qualified persons for the post of Lecturer II in Law. The successful candidate will be responsible for the teaching and supervision of students in the areas of Law. The candidate should have a degree in Law or equivalent, and a minimum of five years' experience in the field of Law. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Arlington Hill College, 100 Colinton Road, London EC1A 3BB.

## Colleges of Education

**BIRMINGHAM, 120 ELLENBOROUGH COLLEGE OF EDUCATION**  
Principal, Mr. C. H. Jones, 100 Colinton Road, London EC1A 3BB.  
Applications are invited from suitably qualified persons for the post of Lecturer II in Law. The successful candidate will be responsible for the teaching and supervision of students in the areas of Law. The candidate should have a degree in Law or equivalent, and a minimum of five years' experience in the field of Law. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Ellenborough College of Education, 100 Colinton Road, London EC1A 3BB.

**REMINDER**  
Advertisements must reach The Times Higher Education Supplement by the Friday prior to publication. For classified display advertising, please contact the Advertising Department, The Times Higher Education Supplement, 100 Colinton Road, London EC1A 3BB.

## Fellowships and Studentships

**DELFEST  
THE DELFEST UNIVERSITY**  
The Northern Ireland Institute for the Study of the History of the North. Applications are invited from suitably qualified persons for the post of Lecturer II in Law. The successful candidate will be responsible for the teaching and supervision of students in the areas of Law. The candidate should have a degree in Law or equivalent, and a minimum of five years' experience in the field of Law. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Delfest University, 100 Colinton Road, London EC1A 3BB.

**LONDON  
UNIVERSITY OF BIRMINGHAM**  
FELLOWSHIP IN SOCIOLOGY  
The University of Birmingham is seeking a Fellow in the Department of Sociology. The successful candidate will be responsible for the teaching and supervision of students in the areas of Sociology. The candidate should have a degree in Sociology or equivalent, and a minimum of five years' experience in the field of Sociology. The salary scale for Fellow is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, University of Birmingham, 100 Colinton Road, London EC1A 3BB.

## Courses

**CENTRAL COUNCIL FOR EDUCATION AND TRAINING IN SOCIAL WORK**

**SOCIAL WORK**  
...training is a must if you plan to help!

Universities and colleges offering professional training courses for work in the social services are now considering applications for the autumn of 1977. For those wanting to qualify in all settings and services the appropriate courses lead to the Certificate of Qualification in Social Work (CQSW) awarded by the Central Council for Education and Training in Social Work (CCETSW). Some courses are specifically designed for students over the age of 30.

**Study for Residential and Day Services**  
Many CQSW courses now include study and practice in residential and day care work. Other courses in residential work only are available (NOTE: jobs in residential homes do not necessarily involve living in). Those wishing to qualify as teachers-in-training of mentally handicapped adults can study for the Diploma in the Training and Further Education of Mentally Handicapped Adults awarded by CCETSW.

**How to apply**  
Most universities and colleges have arranged for applications to be handled by a clearing house system, which saves you applying to many institutions individually. For full details of all courses as well as for information about grant aid and the application procedure, fill in the form below.

**CCETSW Information Service (Dept. 800)**  
36 Houndmound Way  
London WC1A 2SR

## Colleges of Further Education

**LONDON  
INNER LONDON EDUCATION AUTHORITY**  
Principal, Mr. C. H. Jones, 100 Colinton Road, London EC1A 3BB.  
Applications are invited from suitably qualified persons for the post of Lecturer II in Law. The successful candidate will be responsible for the teaching and supervision of students in the areas of Law. The candidate should have a degree in Law or equivalent, and a minimum of five years' experience in the field of Law. The salary scale for Lecturer II is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, Inner London Education Authority, 100 Colinton Road, London EC1A 3BB.

## UNIVERSITY OF LEICESTER SCHOOL OF EDUCATION

## MASTER OF EDUCATIONAL STUDIES

The University of Leicester School of Education invites applications from suitably qualified candidates for the MEd Studies. This degree has been designed to provide teachers and administrators with an opportunity to extend their professional education at an advanced level.

It is hoped to offer the course on both a full- and part-time basis (one year full-time, two years part-time). The course will begin in October 1977, and assessment will be by written examination and dissertation.

Candidates will study three of the following options:  
English as a Foreign Language, Educational Assessment and Evaluation, English in the Curriculum, Primary Education, I-Curriculum Studies, Languages in Modern Language Primary and Middle Schools, Teaching and Learning, I, Languages in Modern Language Primary and Middle Schools, Teaching and Learning, II, The Humanities Curriculum, Moral Education, Science Education, I, Science Education, II.  
Full details and application forms can be obtained from:  
**Secretary to MEd Studies Course**  
University of Leicester School of Education  
21 University Road, Leicester LE1 7RP

## University of Leicester School of Education

The University of Leicester School of Education offers four separate and distinct full-time degree courses leading to the award of the M.A. (Education):

- (1) SOCIOLOGY OF EDUCATION AND MASS COMMUNICATIONS
- (2) HISTORY OF EDUCATION
- (3) PSYCHOLOGY OF EDUCATION
- (4) PHILOSOPHY OF EDUCATION

The School of Education, in conjunction with the University Centre for Mass Communication Research and the Department of the History of Science, invites applications from suitably qualified candidates for each of these separately taught degrees. Each course is for one calendar year, beginning in October, 1977, and assessment is by written examination and dissertation. Full details and application forms can be obtained from:

**Secretary to M.A. (Education) Course**  
University of Leicester School of Education  
21 University Road, Leicester LE1 7RP.  
PLEASE STATE CLEARLY FOR WHICH COURSE DETAILS ARE REQUESTED

## Administration

## CET COUNCIL FOR EDUCATIONAL TECHNOLOGY

## REQUIRES TWO PROGRAMME ORGANISERS

to take major responsibilities for devising and implementing the Council's programme of innovation and development in all sectors of education and training.

**Programme A**  
aims to help senior policy makers and administrators to make well-informed decisions about the applications of educational technology. It includes a series of high level conferences, and the study, documentation and coding of significant innovations. Vacancy from 1st April 1977.

**Programme C**  
aims to extend and coordinate national and other services to support the professional development of teachers and administrators. It includes a series of high level conferences, and the study, documentation and coding of significant innovations. Vacancy from 1st April 1977.

Both posts require a knowledge of the administrative and management aspects of education and training, and a high degree of personal initiative. Salary within range £6,000 to £7,070. Initial appointment: 2 years. Secondment acceptable.

Further details are available from the Office Manager, Council for Educational Technology, 3 Devonshire Street, London W1N 2BA. Closing date for applications 10th November, 1976. Please quote reference PO2.

## Courses continued

## JAMES COOK UNIVERSITY OF NORTH QUEENSLAND

## HIGHER DEGREE COURSES - 1977

Applications are invited from university graduates or persons who will graduate in 1977 for enrolment in Higher Degree Courses at James Cook University of North Queensland in 1977.

The University is situated at Townsville on the coast of North Queensland, Australia. This location gives ready access to a variety of tropical environments which provide excellent facilities for research. In particular, the proximity of the Great Barrier Reef and the diversity of the tropical flora and fauna present unique research opportunities.

Research programmes for the Doctor of Philosophy and Master's Degree are available in the following disciplines:

**Faculty of Science**  
Biological Sciences  
Botany  
Marine Biology  
Zoology  
Chemistry and Biochemistry  
Physics  
Mathematics  
Faculty of Veterinary Science  
Civil Engineering  
Systems Engineering  
Electrical Engineering

**Faculty of Education**  
Education  
Special Education  
Faculty of Commerce and Economics  
Commerce  
Economics  
Faculty of Arts  
English  
Geography  
History  
Modern Languages

NOTE: Interested persons are invited to seek further details of the specific research programmes through the Registrar.

COURSEWORK MASTER'S PROGRAMMES are available for:

**Master of Science (M.Sc.)**  
Marine Biology  
Mining and Exploration Geology  
Tropical Veterinary Science (Animal Health and Animal Production)  
**Master of Education (M.Ed.)**  
Master of Education in Special Education (M.Ed.(Sp.Ed.))  
**Master of Engineering Science (M.Eng.Sc.)**  
Civil Engineering  
Systems Engineering  
**Master of Letters (M.Litt.)**  
All Arts Departments

Application forms and details are obtainable from the Registrar, James Cook University of North Queensland, c/o Office, James Cook University, Old 4611, Australia. Such applications should be mailed as to reach the University by 30 November, 1976.

## Overseas

**Queensland Institute of Technology**

**BRISBANE AUSTRALIA**

**SCHOOL OF BUSINESS STUDIES**

**HEAD OF SCHOOL**

QUOTE: V116/76

Applications are invited for the above Senior Academic position which will become vacant upon the retirement of the present Head of School in February, 1977.

The School of Business Studies, with a current enrolment of some 600 full-time and 1,200 part-time students, comprises the Departments of Accounting, Communications and General Studies, and Management, and offers degree programmes in these areas with majors in accounting, data processing, advertising, public relations, journalism, economics, marketing, personnel/psychology and public administration. Postgraduate courses in accounting and business administration and an associate diploma course in commercial studies are also offered. Staff of the School also provide a wide range of services teaching in courses conducted by other Schools of the Institute.

The salary for Head of School is currently at professional level (A24-155 per annum). This is subject to the application of increases arising from the recent recommendations of the Academic Salaries Tribunal.

Persons requiring further information should write to the Personnel Officer, Queensland Institute of Technology, PO Box 246, North Quay, 4000, Brisbane, Australia.

Applications quoting position, reference number, age, marital status, full details of qualifications and experience together with the names and addresses of three referees should reach the Personnel Officer (address above), by 27th November, 1976.

## ADMINISTRATION continued

## DEVELOPMENT AGENCY

**PLANNING OFFICER**  
The World Council of Churches is looking for a Planning Officer to be based in Geneva. The successful candidate will be responsible for the planning and coordination of the Council's development work. The candidate should have a degree in Planning or equivalent, and a minimum of five years' experience in the field of Planning. The salary scale for Planning Officer is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, World Council of Churches, 100 Colinton Road, London EC1A 3BB.

**THE BRITISH COUNCIL**  
invites applications for the following post:  
**MINISTRY OF EDUCATION**  
Consultancy, research, production, etc. The successful candidate will be responsible for the consultancy, research, production, etc. of the Council's educational materials. The candidate should have a degree in Education or equivalent, and a minimum of five years' experience in the field of Education. The salary scale for Consultancy Officer is £3,279 to £5,031, plus £312 supplement. Applications should be sent to the Staffing Section, British Council, 100 Colinton Road, London EC1A 3BB.

## Overseas continued

## AUSTRALIA ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY

## PRINCIPAL LECTURER DEPARTMENT OF APPLIED PHYSICS

Applications are invited for the position of Principal Lecturer in the Department of Applied Physics, where there are five groups working in the following areas of Physics:

**Optics**  
**Acoustics**  
**Material Science**  
**Instrument Science**  
**Radiation**

Applicants should possess relevant tertiary qualifications, preferably a higher degree and extensive experience in one of the areas of interest of the department. Tertiary teaching experience would be an advantage.

Salary: \$A21,406 p.a.

REF. NO: 121/28/AS CLOSING DATE: 22/11/76

Intending applicants should obtain a Schedule of Duties from the Personnel Branch, Box 2476V, G.P.O., Melbourne, Australia.

Royal Melbourne Institute of Technology 5083

## AUSTRALIA ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY

## LECTURER IN AERONAUTICAL ENG.

DEPARTMENT OF CIVIL & AERONAUTICAL ENGINEERING.

Applications are invited for the position of Lecturer in Aeronautical Engineering.

The Department conducts a four-year degree course in Aeronautical Engineering directed to the needs of the Australian Aircraft Industry. The Institute has adequate laboratory, computer and library facilities to support this course.

Applicants should possess a first degree and industrial experience in the aircraft industry. A higher degree and some teaching experience would be an advantage. Experience in one or more of the fields of aircraft propulsion, aerostatics or aircraft structures would be preferred.

Salary is within the range \$A13,229 - \$A17,688 per annum.

REF. NO: 111/17/AS CLOSING DATE: 31/12/76

Intending applicants should obtain a Schedule of Duties from the Personnel Branch, Box 2476V, G.P.O., Melbourne, Vic. 3001, Australia.

Royal Melbourne Institute of Technology 4188

## AUSTRALIA ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY

## COMPUTER SCIENTIST

The Department of Mathematics and Computer Science, Royal Melbourne Institute of Technology, Melbourne, Australia, is seeking a well-qualified Senior Computer Scientist for the position of Lecturer in the Department of Mathematics and Computer Science.

The successful candidate will be required to make contributions to the academic programs of the Department in the field of Computer Science, and to supervise the work of other professional staff and top level communication skills are essential.

A salary in excess of \$A20,000 will be paid. The successful applicant is also entitled to economy allowances (including wife and dependent children), and contributions towards removal expenses.

Appointment can be made on a definite basis (2 to 3 years) or on a secured basis following the completion of a probationary period.

REF. NO: 123/34/AS CLOSING DATE: 8/11/76

Intending applicants should obtain a Schedule of Duties from the Personnel Branch, Box 2476V, G.P.O., Melbourne, Vic. 3001, Australia.

Royal Melbourne Institute of Technology 4184